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July 13, 2017

Ms. Nancy D. Ryan
Hydrogeologist
Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
2300 North Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-3128

Reference: *Supplemental Site Investigation and Remedial Action Plan Review March 27, 2017 Email, April 28, 2017 Email, and June 14, 2017 email*
Former Wayne Pigment Corp.
300 South Barclay and 139 East Oregon Street
Milwaukee, Wisconsin
FID No. 241029470
BRRTS No. 02-41-553395 and 03-41-547627

KEY ENGINEERING GROUP, LTD.
File No. 1609-0017

Dear Ms. Ryan:

Key Engineering Group, Ltd. (KEY) submitted a *Site Investigation Report & Revised Remedial Action Plan* (Supplemental SIR/Revised RAP) to the Wisconsin Department of Natural Resources (WDNR) for review for the property located at 300 South Barclay Street, in Milwaukee Wisconsin (Site) on January 31, 2017 (Figures 1 and 2). Based on a review of the Supplemental SIR/RAP, the WDNR prepared a list of comments and requests for additional information in an email dated March 27, 2017. KEY submitted a response to the March comments in a letter dated April 11, 2017. As a follow-up, additional comments were received from the WDNR in emails dated April 28 and June 14, 2017. A copy of the April 11, 2017 letter and emails are included in Attachment 1.

Below is a summary of the remaining comments and requests for additional information from the WDNR (italicized below), followed by a prepared response on behalf of PPG GP LLC (PPG).

March 27, 2017 and April 28, 2017 WDNR emails requested:

2. ***TCE contamination area: We understand that the pre-excavation soil sampling in the TCE area has already been conducted. Please provide the results and discuss whether the extent and degree of contamination under building 34 has been sufficiently defined.***

Do the results change the limits of the proposed excavation? Provide details on the interior features of the building that might indicate potential source areas and that may present impediments to further investigation.

3. ***The rationale for selecting 8.8 ppm TCE as a clean-up goal should be further discussed.***
4. ***Haz waste determination: Provide further discussion on soil management for the proposed TCE remedial excavation. Specifically, a haz waste determination with details on how soil proposed for excavation has been characterized and how areas determined to be hazardous will be segregated from non-haz.***

Items 2 through 4 from the WDNR letter dated April 11, 2017 and April 28, 2017 email were addressed in a *Soil Trichloroethene Excavation Plan and Hazardous Waste Determination* request submitted to the WDNR on June 14, 2017.

April 28, 2017 WDNR email requested:
"*Provide further discussion regarding (and considering pre-excavation soil sample results) to support a determination that the extent and degree of contamination below building 34 is sufficiently defined to identify significant source areas."*

A total of 17 soil borings (SB-48 through SB-52, SB-89, and V-20 through V-30) were advanced under the footprint of Building 34. Below is a summary of the boring locations and purpose of each boring.

- Borings SB-48, SB-49, and V-20 through V-25 were advanced in an area where Hydrite Chemical historically stored spent hazardous waste.
- Borings SB-50, SB-52, and SB-89 were advanced in bays where WPC conducted milling operations.
- Boring SB-89 was also advanced where a water lateral enters the building. Boring SB-51 was advanced in the center of where an aboveground storage tank (AST) was historically located and an adjacent to a concrete closed sump (solid bottom and no inlets or outlets).
- Borings V-26 through V-30 were advanced within 10 feet in each direction from the former AST location.
- Boring V-26 is also located near a sump.

Two soil samples per boring were collected and submitted for laboratory analysis of volatile organic compounds (VOCs) from depths ranging from 2 to 10 feet below ground surface (bgs). A summary of soil VOC analytical results from the borings under Building 34 is presented in Table 1. Trichloroethene (TCE) was the primary constituent of concern under Building 34. Isoconcentration maps for TCE from 0 to 4 feet and 4 to 6 feet are presented as Figures 3 and 4, respectively. Elevated TCE concentrations were detected in soil from 0 to 6 feet bgs along the northern 1/3 of the building. Lower TCE concentrations were detected in the SB-50 through SB-52 from 2 to 4 feet bgs, and not detected in the samples from 8 to 10 feet bgs. Additionally, TCE was not detected in boring SB-89 from 2 to 4 feet and 8 to 10 feet bgs. Based on the historical site operations, drilling locations, and vertically delineation under the building, the investigation under Building 34 appears sufficient to identify the source areas.

March 27, 2017 and April 28 WDNR emails requested:

6. ***We will require investigation of soil/groundwater in the location of SB-41 where the composite sample (from ? depths) was found to be characteristically hazardous based on ignitability.***

Flashpoint from a composite sample from boring SB-41 from 2 to 6 feet bgs was reported at 124.15 degrees Fahrenheit (^{O}F). Because this detection is less than 140 ^{O}F, the soil does not meet the Subtitle D landfill

acceptance criterion of 140 ^{O}F. Historically, underground storage tanks (USTs) operated by PPG near boring SB-41 contained acetic acid, nitric acid, and bichromate. Nitric acid and bichromate do not have flashpoints. Acetic acid has a flashpoint of 102.2 ^{O}F (closed cup) and pH of 2. Noteworthy, vinegar is diluted acetic acid solution (4.0-4.2 percent acetic acid, 95.8-96.0 percent water). One soil boring will be advanced adjacent to boring SB-41 to confirm the presence of acetic acid. Three additional soil borings are proposed to delineate the extent of the acetic acid impacts (Figure 5). The borings will be advanced to 10 feet bgs. One soil sample per boring will be collected and analyzed for VOCs, acetic acid, pH, and flashpoint. The boring advanced at SB-41 will be converted to a small-diameter temporary well and groundwater will be sampled for VOCs and acetic acid. The small-diameter well with be constructed with a 5-foot, 10-slot polyvinyl chloride screen and riser. Coarse sand will be placed around the screen and 1-foot above. Bentonite will be used to fill the remainder of the annular space. Monitoring well MW-4 and MW-8 will also be sampled for VOCs and acetic acid to evaluate the groundwater quality. pH will also be measured at the three wells. Additionally, a methane calibrated explosimeter will be used to measure the flash point of vapor that accumulates within the well.

March 27, 2017 WDNR email requested:

7. ***We also need additional investigation of soil and groundwater to better define the extent of contamination in the area between Building 11 and the former tank farm – shown as elevated dock area on the site maps. Propose additional investigation in this area.***

Investigation activities were not completed in this area due to the presence of the existing metal dock structure. The dock dimensions are approximately 25 feet by 20 feet or an area measuring 500 square feet. Additional investigation will be completed under the footprint of the dock once it is removed as part of construction activities. The data will be submitted to the WDNR as part of a hazardous waste determination for the soil that will be removed for the proposed Building 11 addition. Proposed soil boring locations are presented on Figure 5. The eastern most soil boring will be converted to a small-diameter well. One soil boring will be advanced to 4 feet which is the depth of the proposed footings. The soil boring that will be converted to a small-diameter well will be advanced to 15 feet bgs. One soil sample per boring will be laboratory analyzed for VOCs, Resource Conservation Recovery Act (RCRA) metals, hexavalent chromium, and trivalent chromium. The small-diameter well will be installed with a 10-foot screen set to intersect the water table. The well will be sampled for VOCs, dissolved metals, total chromium, hexavalent chromium, and trivalent chromium.

An active sub-slab vapor mitigation system will be installed under the Building 11 addition. The vapor mitigation system design and verification sampling are discussed in greater detail in a later section of this letter.

March 27, 2017 WDNR email requested:

8. ***A haz waste determination should be made for any area of the site proposed to be disturbed for remedial excavations, excavation for construction of the remedial cap, utility construction, foundations, etc.***

April 11, 2017 WDNR email requested:
Submittal of detailed drawings showing areas that will be disturbed (for utilities, landscaping, construction, etc.). Detailed landscaping/soil capping plans.

Hazardous waste determinations will be prepared for areas where soil will be disturbed for remedial excavations, excavation for construction of a remedial cap (landscaped areas), utility construction, and foundations. The April 11, 2017 letter from the WDNR stated this submittal is not required prior to receiving approval of the Site Investigation and Remedial Action Plan. Soil disturbed where new utilities will be installed in the right-of-way will be not be sampled for laboratory analysis prior to utility installation. Pre-sampling cannot be conducted safely due to the presence of multiple utilities in the right-of-way. However,

based on the soil analytical results from inside and adjacent to the buildings, a hazardous waste determination can be made without additional sampling in the right-of-way.

Contractors will either install utilities using directional drilling or excavation methods. Where non-hazardous excavations are conducted for utility installation, the soil may be placed back in the excavation if geotechnically suitable. If soil will be placed back in the excavation, a soil management plan will be prepared in accordance with NR718 and submitted to the WDNR for approval prior to initiating activities. Excess non-hazardous soil stockpiled onsite on plastic and covered with plastic pending disposal. Excess hazardous soil will be collected onsite in water tight roll-offs.

March 27, 2017 WDNR email requested:

9. ***Offsite investigations: We understand environmental investigations have recently been conducted at the properties to the west and east of the site and that information may be available to use to better define the extent and degree of potential off-site contamination. Based on the figure, Proposed Off-site Monitoring Well Locations, DNR potentially would like to see additional wells installed at the following locations: northwest of B-2/TW-2, west of TW-4, southwest of TW-3, east of MW-12, off-site south of SB-91. This is in addition to proposed wells: east of TW-10, southeast of MW-15, south of MW-14R and west of MW-19. We understand that some of this investigation may be conducted by the adjacent property owners, we should discuss the suggested new locations, justification for needing or not needing them, features of the site that make it difficult to complete the investigation, and/or responsibility of off-site parties for installing wells, etc. Please indicate if you plan to collect soil samples during construction of off-site monitoring wells. (If such wells are installed by Key).***

The WDNR agreed in an email dated April 28, 2017 that the WDNR would not be requiring the above mentioned additional wells, other than the original four locations proposed in the RAP, at this time.

The current monitoring well network currently includes 20 wells including 19 monitoring wells (MW-1 through MW-13, MW-14R, and MW-15 through MW-19) and one piezometer (PZ-1). Four additional offsite monitoring wells were proposed in the Supplemental SIR/Revised RAP to complete the offsite investigation. The proposed well locations are presented on Figure 5. KEY will attempt to gain access to the property west of 139 East Oregon Street and the properties south and southwest of 300 South Barclay Street. KPRG, the environmental consultant, for 214 East Florida Street, is conducting investigation activities under and adjacent to their building. The data from Florida Street investigation will be used to supplement the dataset for the Site to determine if the fourth well located west of the Florida Street building is necessary.

March 27, 2017 WDNR email requested:

12. ***Remedial Capping Plan: Provide more details regarding construction of the proposed landscaped areas including a description of the types of plants (root ball size) that will be used, and the depth required to accommodate the plantings. Areas requiring excavation that would produce potentially hazardous waste upon excavation should be identified prior to excavation. If applicable, haz waste management rules must be followed.***
13. ***Provide discussion to support the proposed 1.5' thick soil cap. i.e. why it will be protective, can be maintained, etc. We will need details on where exactly the soil cap will be placed, the slope of any non-flat areas, etc. DNR may consider approving a cap of this thickness on the Oregon St. property based on your justification, however, may be more supportable if you add a warning layer. Based on the high concentrations of metals and PVOCs south of building 11, we will require something more protective for landscaped areas on the Barclay parcel. We expect that a capping plan for landscaped areas would ensure that contaminated soil will not be disturbed/encountered in the future. A thicker clean cap with possibly warning layer should be considered and a revised plan proposed.***

Landscape drawings are included in Attachment 1. The drawings show the location of landscaping, the proposed species to be planted, and the root size. Cross-sectional views of the plantings are also presented. Below is a summary of the barrier cap plan for landscaped areas at the site. The barrier cap will be installed during the construction phase. The landscapers will plant the areas following construction when the clean soil and warning layers are already installed.

Oregon Street Property

A 1.5-foot soil cap is proposed on the Oregon Street property for areas that will be landscaped. The onsite topography for the landscaped areas is minimal. The proposed final topography and location of proposed landscaping are presented on the attached architect drawings. A warning layer consisting of orange or other bright color snow fence, or similar permeable material, will be installed between the impacted soil and overlying clean soil cap. Based on the landscape plan that will be developed, the soil cap will be extended to 3 feet deep and a minimum of 4 feet by 4 feet horizontally where a tree or root ball is greater than 1.5 feet is proposed to eliminate the concern of encountering impacted soil during planting.

Barclay Street Property

A 2-foot soil cap is proposed on the Barclay Street property for areas that will be landscaped. The proposed final topography and location of proposed landscaping are presented on the attached architect drawings. A warning layer consisting of orange or other bright color snow fence, or similar permeable material, will be installed between the impacted soil and overlying clean soil cap. Based on the landscape plan that will be developed, the soil cap will be extended to 3 feet deep and a minimum of 4 feet by 4 feet horizontally where a tree or root ball is greater than 2 feet is proposed to eliminate the concern of encountering impacted soil during planting.

March 27, 2017 WDNR email requested:

15. ***Vapor Intrusion: Sub-slab vapor depressurization system (SSDS): In addition to the proposed active SSDS under building 34, based on the sub-slab results from Building 33 where two of the four locations exceeded vapor risk screening levels, we will require an active system under building 33 and the proposed addition between building 33 and 34.***
16. ***Discussion with Alyssa Sellwood. She suggested the following regarding the active system design: She suggested that the systems in Buildings 33 and 34 be designed with clean air intakes. This would be good for Building 11 too, if possible. (See attached figure) To allow verification of system effectiveness, consider installing ports during construction that extend to below the new floor to allow testing for pressure differential. Also consider installing a port or ports extended below the original floor for future testing for TCE to determine if the system can be turned off. Provide further details on construction design and how you will verify SSDS is operating as designed for the active system(s). Indoor air sampling will be required.***

KEY discussed the proposed sub-slab design in greater detail with Ms. Sellwood of the WDNR. Ms. Sellwood was in agreement with KEY that in order for the proposed design to be effective, the interstitial granular space must exert a negative pressure. To install clean air intakes will negate negative pressure, effectively disabling the system from pulling a vacuum. Ms. Sellwood stated that KEY will have to prove the system is working. KEY informed Ms. Sellwood that we will be installing a sampling tube that will extend from the occupied space to the interstitial space, and a second tube extending from the occupied space to below the original floor slab. The sampling tubes will have a dual purpose:

1. The first purpose being to measure differential pressure between the occupied space and the original floor sub-slab (interstitial space) to prove depressurization, provided that zone is not saturated.
2. The second purpose will be to sample soil gas within the interstitial sub-slab space and beneath the original floor slab, provided that zone is not saturated.

In addition, KEY discussed with Ms. Sellwood that we will be installing a sealed sump within the interstitial gravel space. The sump pump would remove water that might accumulate within the interstitial space. The sump will be sealed air tight to ensure the negative pressure can be maintained using a radon/dome lid.

March 27, 2017 WDNR email requested:

17. For Building 11, we will need more soil and groundwater investigation in the area where the addition is planned (mentioned above). This information should be used to determine whether the vapor mitigation system in this area should be active. Also, because contaminated groundwater is in contact with the building, you cannot rule out vapor intrusion as a pathway of concern and will need to conduct a performance evaluation to verify the effectiveness of the passive system – either by verifying a constant negative pressure, and/or verify that the air trapped below the new floor is sufficiently oxygenated and not contaminated above VRSLs. Potential movement of air from outside the building near SG-4 should be evaluated and basement walls inspected/sealed to limit that possibility. Collection of Indoor air sample(s) will also be required. Please provide additional details on how the system will be constructed, including cross section, and describe how verification testing accomplished.

Additional investigation where the Building 11 addition is planned is addressed in Item 7 above.

Active vapor mitigation systems are proposed at Buildings 11, 33, 34, and under the two proposed building additions to address the potential for vapor intrusion. The active vapor mitigation systems design for Buildings 11, 33, and 34 is presented on Figures 6 through 10. The active vapor system designs were discussed with Ms. Alyssa Sellwood of the WDNR in April 2017. The summary of the design components is presented below.

Buildings 11, 33 and 34 Active Vapor Mitigation System Design

Below is a brief description of the system design:

- An active system will be installed over the existing concrete basement floor in Building 11 and existing first floor concrete slab in Buildings 33 and 34.
- Four inches of clear 1-inch stone will be placed over the existing concrete floors with 3-inch corrugated drain tile laid in the stone. The drain tile will be placed approximately 1-foot from the interior building walls forming a rectangle. One length of drain tile will also be connected to this perimeter drain tile from wall to wall for every 2,500 square feet of floor space.
- The drain tile will be vertically extended and connected to 4-inch PVC solid pipe through building interior walls and penetrate the roofline. A vapor barrier boot will be placed around the vertical extensions and taped to create a seal. Radonaway RP380 fans will be connected to the PVC roof penetrations.
- Geotextile fabric will be placed over the entire layer of clear stone and topped with a minimum of two inches of engineered fill (traffic bond).
- A new concrete floor will be poured over the engineering fill (minimum of four inches thick).

- Each vertical PVC floor penetration will have a monitoring point installed. The monitoring points will have a u-tube manometer to measure pressure from the fans and pitot tube to measure air flow and potentially sample vapor between the two concrete slabs.
- Two vacuum tubes will be installed for every 2,000 square feet of floor space. One vacuum tube will be installed between concrete floors to measure the differential pressure between the interstitial space (to prove depressurization) and the original floor slab. A second vacuum tube will be installed beneath the original floor slab to measure the differential pressure between the original floor slab and the interstitial space.
- A new sump will be installed as a backup measure to drain water in the clear stone layer between the original floor slab and new slab, if water should collect.

Building 11 Sumps and Basement Walls

The basement of Building 11 partially penetrates the water table. The sumps in Building 11 are proposed to be abandoned with a flowable fill (slurry or concrete) and topped with concrete level with the floor. The exterior basement walls of Building 11 are water-proofed. Based on observations from the interior walls, there are no cracks, seams, weeping, or florescence from water.

Buildings 33 and 34 are slab-on-grade construction with no basements.

Elevator Shafts

There is currently one elevator shaft in Building 11, 33, and 34. The elevator shaft floors will be removed and replaced with a new concrete floor. A closed sump will be installed at the base of each elevator shaft. The interior of the elevator shafts will be sealed with water-proof paint. Fire code for elevator shafts prohibits the installation of interior pipes and wall penetrations.

Building Addition Active Vapor Mitigation System Design

Active vapor mitigation systems will be installed under the two proposed building additions between Buildings 33 and 34 and south of Building 11. Active vapor mitigation system design is presented on Figure 10. The active vapor system design was discussed with Ms. Alyssa Sellwood of the WDNR in April 2017. Below is a brief description of the system design:

- An active system will be installed under the slab-on-grade construction for the two building additions.
- Minimum of four inches of clear 1-inch stone will be placed under the proposed new concrete floor with 3-inch corrugated drain tile laid in the stone. The drain tile will be placed approximately 1-foot from the interior building walls forming a rectangle. One length of drain tile will also be connected to this perimeter drain tile from wall to wall for every approximately 2,500 square feet of floor space, or less.
- The drain tile will be vertically extended and connected to 4-inch PVC solid pipe through building interior walls and penetrate the roofline. A vapor barrier boot will be placed around the vertical extensions and taped to create a seal. Radonaway RP380 fans will be connected to the PVC roof penetrations.
- Geotextile fabric will be placed over the entire layer of clear stone and topped with a minimum of two inches of engineered fill (traffic bond).
- A new concrete floor will be poured over the engineering fill (minimum of four inches thick).

- Each vertical PVC floor penetration will have a monitoring point installed. The monitoring points will have a u-tube manometer to measure pressure from the fans and pitot tube to measure air flow and potentially sample vapor between the two concrete slabs.
- One vacuum tube will be installed for every approximately 2,000 square feet of floor, or less, space to measure the differential pressure between occupied space and original floor slab.

Verification of Active Vapor Mitigation System Effectiveness

Testing and sampling will be completed at Buildings 11, 33, 34, and the two building additions to confirm the active effectiveness of the installed vapor mitigation systems. A Maintenance Plan will also be prepared following the system installations for review and approval by the WDNR. Below is a summary of the proposed testing and sampling that will be completed in each of the five buildings.

- An anemometer will be used to measures the airflow rate of each Radonaway RP380 fan.
- An anemometer will also be used to measure airflow through a pitot tube installed at each monitoring point.
- Each u-tube manometer will be inspected to confirm depressurization at the vertical riser that is connected to a Radonaway fan.
- A manometer will be used to measure the vacuum at each set of vacuum tubes installed in Buildings 11, 33, and 34 and the single vacuum tube installed beneath the concrete slab-on-grade floors for the two building additions to show depressurization.
- A smoke pen will be used to verify the radon seal on the Building 11 sump is adequate.
- An air sampling program will be implemented following the first year of post construction. An air sampling program for subsequent years will be developed and approved by the WDNR. The first-year air sampling program will include spring and winter sampling as follows:

West of South Barclay Street

- One background air sample will be collected in a 6-liter stainless steel Summa canister with a 24-hour regulator from an area south of Building 11 and the Building 11 addition.
- Concurrent with collection of the background sample, two sub-slab vapor samples will be collected using 6-liter stainless steel Summa canisters with a 30-minute regulator from the interstitial space (between the new concrete floor and original concrete floor) in Building 11 and one sub-slab vapor sample will be collected from beneath the new slab-on-grade floor for the Building 11 addition.
- Concurrent with the sub-slab vapor samples, one co-located indoor air sample per sub-slab vapor sample will be collected using 6-liter stainless steel Summa canisters with a 24-hour regulator in Building 11 and the Building 11 addition.
- Sub-slab vapor samples will be collected from two monitoring points installed on the vertical PVC risers.
- Samples will be submitted to a WDNR-certified laboratory for VOC analysis using Method TO-15. A total of seven samples will be collected in the spring and in the winter season.
- A letter report will be submitted to the WDNR following each sampling event to summarize the activities completed, procedures, results, and conclusions.

East of South Barclay Street

- One background air sample will be collected in a 6-liter stainless steel Summa canister with a 24-hour regulator from an area west of the Building 33 and 34 connector building between Buildings 33 and 34.
- Concurrent with collection of the background sample, two sub-slab vapor samples will be collected using 6-liter stainless steel Summa canisters with a 30-minute regulator from the interstitial space (between the new concrete floor and original concrete floor) in Buildings 33 and 34 and one sub-slab vapor sample will be collected from beneath the new slab-on-grade floor for the connector building.
- Concurrent with the sub-slab vapor samples, one co-located indoor air sample per sub-slab vapor sample using 6-liter stainless steel Summa canisters with a 24-hour regulator in Building 11 and the Building 11 addition.
- Sub-slab vapor samples will be collected from two monitoring points installed on the vertical PVC risers.
- Samples will be submitted to a WDNR-certified laboratory for VOC analysis using Method TO-15. A total of seven samples will be collected in the spring and in the winter season.
- A letter report will be submitted to the WDNR following each sampling event to summarize the activities completed, procedures, results, and conclusions.

April 28, 2017 WDNR email request:
Complete an assessment of the potential for vapor intrusion from contaminants on the 300 S. Barclay property to impact buildings on the 214 E Fla St. property. Provide plan to collect data if vapor intrusion cannot be ruled out based on preliminary screening criteria. Utilize information collected on adjacent property to determine if/where vapor sampling should be conducted. This does not need to be completed prior to SI/RAP approval, but it must be clear that an assessment will be conducted, and steps taken to mitigate/remediate if necessary.

June 14, 2017 WDNR email request:
I also wanted to mention the 214 off-site investigation. You had submitted a letter, 214 E. Florida St. Vapor Intrusion Assessment dated May 10, 2017, where you had asked for DNR concurrence that the owner of 214 E. Fla. should be responsible for conducting a vapor assessment at their property. As discussed on the phone with you (and Ken the next day) on or around May 15, while DNR will require a vapor assessment to be conducted by the 214 site, that does not relieve PPG GP from its responsibility to evaluate the pathway for potential impacts from contaminants originating on the PPG property. So, we do not concur with request in the May 10 letter. However, as you know, since then, 214 E. Fla. has submitted a workplan to DNR and requested dnr review/approval of their plan to conduct site investigation activities at their property, including some sub-slab investigation. I have not yet reviewed the Fla. St. work plan in detail yet. PPG GP may of course utilize information collected during the 214 E. Fla. site investigation once it becomes available to support/supplement the vapor assessment required of PPG.

KEY submitted a "214 East Florida Street Vapor Intrusion Assessment" letter to the WDNR on May 10, 2017. The letter stated KEY had completed a vapor intrusion assessment walk-through on March 16, 2017. The letter also identified soil impacts under the 214 East Florida Street Building from the KPRG Phase II Environmental Site Assessment report. It is KEY's understanding that KPRG submitted a Site

Investigation Work Plan (Work Plan) to the WDNR dated June 6, 2017. The Work Plan included soil, groundwater, and vapor testing. The WDNR also communicated that additional vapor testing by KPGR would required under the building in addition to the proposed work.

KEY will complete a vapor intrusion assessment of the 214 East Florida Street building, as related to the migration of contaminants from the Site. The vapor intrusion assessment will include an evaluation of the Site data including a summary of soil, groundwater, and vapor data and incorporate available soil, groundwater, and vapor data from the 214 East Florida Street investigation. Based on the results of the evaluation, conclusions will be developed as to the source(s) of any vapor impacts for the 214 East Florida Street building, and recommendations will be developed regarding steps to mitigate or remediate the risk, if warranted.

Closing Remarks

Thank you for your consideration. Please call if you have any questions or additional comments.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Toni Schoen
Senior Project Manager

D'Arcy Gravelle, CPG, PG
Principal Hydrogeologist

Attachments

Table 1	Soil Analytical Results Under Building 34
Figure 1	Site Location Map
Figure 2	Site Layout Map
Figure 3	Soil Trichloroethene Isoconcentration Map (4-6 Feet)
Figure 4	Soil Benzo(a)pyrene Isoconcentration Map Less than 4 Feet
Figure 5	Proposed Boring and Well Locations
Figure 6	Building 11 Active Vapor Mitigation System Design
Figure 7	Building 11 and New Building Vapor Mitigation System Floor Plans
Figure 8	Buildings 33 and 34 Active Vapor Mitigation System Design
Figure 9	Buildings 33, 34, and New Building Vapor Mitigation System Floor Plans
Figure 10	New Building Active Vapor Mitigation System Design
Attachment 1	Key Engineering *Supplemental Site Investigation/Remedial Action Plan Review March 27, 2017 Email**, WDNR March 27, 2017 Email, April 28, 2017 Email, and June 14, 2017 Email
Attachment 2	Landscaping Drawings

*Attachment includes the text, tables, and figures.

Tables

Table 1. Soil Analytical Results Under Building 34
Former Wayne Pigment Corp, 300 Barclay Street and 139 Oregon Street, Milwaukee, Wisconsin

PARAMETERS	Non-Industrial Direct Contact Residual Contaminant Level	Industrial Direct Contact RCL (mg/kg)	Protection of Groundwater Residual Contaminant Level	Sample ID													
				SB-48		SB-49		SB-50		SB-51		SB-52		SB-89		V-20	
Date Collected				9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/20/2016	9/20/2016	2/15/2017	2/15/2017
Depth (feet bgs)				2-4	4-6	2-4	8-10	2-4	8-10	2-4	8-10	2-4	8-10	2-4	8-10	4-6	6-8
Saturated(s)/Unsaturated(u)				u	s	u	s	u	s	u	s	u	s	u	s	s	s
VOCs (mg/kg)																	
Benzene	1.6	7.07	0.0051	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	**0.087**	<0.025	<0.025	<0.050	<0.025	<0.025	<0.011	**0.022**
Bromobenzene	342	679	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.026	<0.031
Bromomethane	9.6	43	0.0051	<0.56	<0.14	<1.4	<0.070	<0.070	<0.56	<0.078	<0.070	<0.071	<0.14	<0.070	<0.070	<0.059	<0.070
n-Butylbenzene	108	108	---	<0.20	<0.050	<0.50	<0.025	<0.025	8.8	0.065J	<0.025	<0.025	1.9	<0.025	<0.025	<0.025	<0.030
sec-Butylbenzene	145	145	---	<0.20	<0.050	<0.50	<0.025	<0.025	11.5	0.041J	<0.025	<0.025	2.6	<0.025	<0.025	<0.030	<0.035
tert-Butylbenzene	183	183	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.030	<0.035
Chlorobenzene	370	761	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.029	<0.034
Chloroethane	---	---	0.2266	<0.54	<0.13	<1.3	<0.067	<0.067	<0.54	<0.074	<0.067	<0.068	<0.13	<0.067	<0.067	<0.037	<0.045
Chloroform	0.454	1.98	0.0033	<0.37	<0.093	<0.93	<0.046	<0.046	<0.37	<0.052	<0.046	<0.047	<0.093	<0.046	<0.046	<0.027	<0.033
1,1-Dichloroethane	5.06	22.2	0.4828	<0.20	0.45	<0.50	**0.64**	<0.025	<0.20	<0.028	0.22	<0.025	<0.050	<0.025	<0.025	0.094	**2.1**
1,2-Dichloroethane	0.652	2.87	0.0028	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.029	<0.035
1,1-Dichloroethene	320	1,190	0.005	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.029	<0.035
cis-1,2-Dichloroethene	156	2340	0.0412	<0.20	<0.050	**0.69J**	**2.7**	0.036J	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	**0.26**	**0.17**
trans-1,2-Dichloroethene	1,560	1850	0.0626	<0.20	<0.050	<0.50	**1.4**	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.026	<0.031
Di-isopropyl ether	2,260	2260	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.021	<0.024
Ethylbenzene	8.03	35.4	1.57	<0.20	<0.050	<0.50	0.073J	<0.025	<0.20	0.20	<0.025	<0.025	<0.050	<0.025	<0.025	<0.014	<0.016
Hexachlorobutadiene	1.63	7.49	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.033	<0.039
Isopropylbenzene	---	---	---	<0.20	<0.050	<0.50	<0.025	<0.025	7.9	0.090	<0.025	<0.025	1.8	<0.025	<0.025	<0.029	<0.034
p-Isopropyltoluene	162	162	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	0.042J	<0.025	<0.025	<0.050	<0.025	<0.025	<0.027	<0.032
2-Butanone (MEK)	28,400	28,400	1.6661	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	61.8	1150	0.0026	<0.20	<0.050	<0.050	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.12	<0.14
Naphthalene	5.52	24.1	0.6582	0.48J	0.22J	**0.96J**	0.064J	0.45	0.59J	**1.1**	<0.040	0.18J	0.20J	0.33	<0.040	<0.025	<0.030
n-Propylbenzene	---	---	---	<0.20	<0.050	<0.50	<0.025	<0.025	15.8	0.13	<0.025	<0.025	3.3	<0.025	<0.025	<0.031	<0.037
Styrene	867	867	0.22	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.029	<0.034
Tetrachloroethene	33	145	0.0045	<0.20	<0.050	<0.50	<0.025	**0.038J**	<0.20	**0.036J**	<0.025	<0.025	<0.050	<0.025	<0.025	<0.027	<0.033
Toluene	818	818	1.1072	<0.20	0.067J	<0.50	0.067J	0.046J	<0.20	1.0	<0.025	0.13	<0.050	<0.025	<0.025	<0.011	0.020 J
1,2,3-Trichlorobenzene	62.6	934	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.034	<0.041
1,2,4-Trichlorobenzene	24	113	0.408	<0.38	<0.095	<0.95	<0.048	<0.048	<0.38	<0.053	<0.048	<0.048	<0.095	<0.048	<0.048	<0.025	<0.030
1,1,1-Trichloroethane	640	640	0.1402	**4.5**	**18.0**	**4.0**	**0.27**	**0.18**	<0.20	**0.29**	<0.025	<0.025	<0.050	<0.025	<0.025	**0.32**	**0.25**
1,1,2-Trichloroethane	1.59	7.01	0.0032	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.026	<0.031
Trichloroethene	1.3	8.41	0.0036	**49.2**	**9.7**	**122**	**9.8**	**4.7**	<0.20	**10.4**	<0.025	**0.79**	<0.050	<0.025	<0.025	**9.7**	**3.0**
Trichlorofluoromethane	1,230	1230	4.4758	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.032	<0.038
1,2,3-Trimethylbenzene	182	182	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	219	219	---	<0.20	0.066J	<0.50	<0.025	<0.025	1.6	0.70	<0.025	0.058J	1.2	<0.025	<0.025	<0.027	<0.032
1,3,5-Trimethylbenzene	182	182	---	<0.20	<0.050	<0.50	<0.025	<0.025	<0.20	0.18	<0.025	<0.025	<0.050	<0.025	<0.025	<0.028	<0.034
Trimethylbenzenes	---	---	1.3821	<0.20	0.066	<0.50	<0.025	<0.025	**1.6**	0.88	<0.025	0.058	1.2	<0.025	<0.025	ND	ND
Vinyl Chloride	0.067	2.08	0.0001	<0.20	<0.050	<0.50	**4.1**	<0.025	<0.20	<0.028	<0.025	<0.025	<0.050	<0.025	<0.025	<0.019	<0.023
m&p-Xylene	---	---	---	<0.40	<0.10	<1.0	0.15J	<0.050	<0.40	1.8	<0.050	0.14J	<0.10	<0.050	<0.050	NA	NA
o-Xylene	---	---	---	<0.20	0.072J	<0.50	0.062J	0.036J	<0.20	0.98	<0.025	0.075J	<0.050	<0.025	<0.025	NA	NA
Xylenes	260	260	3.96	<0.40	0.072	<1.0	0.212	0.036	<0.40	2.78	<0.50	0.215	<0.10	<0.050	<0.050	<0.016	<0.019

Bold values exceed protection of groundwater residual contaminant level
Boxed values exceed non-industrial direct contact residual contaminant level
Underlined values exceeded the background threshold value
--- - no standard established
J - Results between laboratory limit of detection and limit of quanitification
bgs - below ground surface
NA - not analyzed or not available
mg/kg - milligrams per kilogram
VOCs - volatile organic compounds

Table 1. Soil Analytical Results Under Building 34
Former Wayne Pigment Corp, 300 Barclay Street and 139 Oregon Street, Milwaukee

PARAMETERS	Non-Industrial Direct Contact Residual Contaminant Level	Industrial Direct Contact RCL (mg/kg)	Protection of Groundwater Residual Contaminant Level	Sample ID													
				V-21		V-22		V-23		V-24		V-25		V-26		V-27	
Date Collected				2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017	2/15/2017
Depth (feet bgs)				4-6	6-8	4-6	6-8	4-6	6-8	4-6	6-8	4-6	6-8	4-6	6-8	4-6	6-8
Saturated(s)/Unsaturated(u)				s	s	s	s	s	s	s	s	s	s	s	s	s	s
VOCs (mg/kg)																	
Benzene	1.6	7.07	0.0051	<0.020	<0.026	<0.14	<0.064	<0.010	<0.012	<0.077	<0.012	<0.053	<0.078	<0.011	0.019	<0.011	<0.0095
Bromobenzene	342	679	---	<0.048	<0.063	<0.33	<0.16	<0.025	<0.028	<0.19	<0.029	<0.13	<0.19	<0.027	<0.025	<0.027	<0.023
Bromomethane	9.6	43	0.0051	<0.11	<0.14	<0.74	<0.35	<0.056	<0.063	<0.42	<0.066	<0.29	<0.43	<0.060	<0.057	<0.059	<0.052
n-Butylbenzene	108	108	---	<0.045	<0.059	<0.31	1.4	<0.027	<0.026	<0.18	<0.028	<0.12	<0.18	<0.025	<0.024	<0.025	<0.022
sec-Butylbenzene	145	145	---	<0.054	<0.070	<0.37	3.4	<0.028	<0.031	<0.21	<0.033	<0.15	<0.21	<0.030	<0.028	<0.030	<0.026
tert-Butylbenzene	183	183	---	<0.054	<0.070	<0.37	<0.17	<0.028	<0.031	<0.21	<0.033	<0.15	<0.21	<0.030	<0.028	<0.030	<0.026
Chlorobenzene	370	761	---	<0.052	<0.068	<0.36	<0.17	<0.027	<0.030	<0.20	<0.032	<0.14	<0.21	<0.029	<0.027	<0.029	<0.025
Chloroethane	---	---	0.2266	<0.068	<0.089	<0.47	<0.22	<0.036	<0.040	<0.27	<0.042	<0.18	<0.27	<0.038*	<0.036*	<0.038*	<0.033*
Chloroform	0.454	1.98	0.0033	<0.050	<0.066	<0.34	<0.16	<0.026	<0.029	<0.20	<0.031	<0.13	<0.20	<0.028	<0.026	<0.028	<0.024
1,1-Dichloroethane	5.06	22.2	0.4828	0.074 J	0.35	**1.0**	**0.70**	0.047 J	0.080	0.36 J	0.46	<0.15	**2.7**	0.093	0.20	<0.031	<0.027
1,2-Dichloroethane	0.652	2.87	0.0028	<0.053	<0.069	<0.37	<0.17	<0.028	<0.031	<0.21	<0.032	<0.14	<0.21	<0.030	<0.028	<0.029	<0.025
1,1-Dichloroethene	320	1,190	0.005	<0.052	<0.069	<0.36	<0.17	<0.028	<0.031	<0.21	**0.070 J**	<0.14	**0.77**	<0.030	<0.028	<0.029	<0.025
cis-1,2-Dichloroethene	156	2340	0.0412	**0.80**	**5.5**	**11**	**15**	**0.11**	**0.23**	**0.94**	**1.8**	**2.3**	**15**	**0.20**	**0.27**	**0.088**	**0.043 J**
trans-1,2-Dichloroethene	1,560	1850	0.0626	<0.047	**1.1**	<0.33	**10**	<0.025	<0.028	<0.19	**0.30**	<0.13	**1.0**	<0.027	<0.025	<0.026	<0.023
Di-isopropyl ether	2,260	2260	---	<0.037	<0.049	<0.26	<0.12	<0.019	<0.022	<0.15	<0.023	<0.10	<0.15	<0.021	<0.020	<0.021	<0.018
Ethylbenzene	8.03	35.4	1.57	<0.025	0.36	**1.7**	0.81	<0.013	<0.014	0.40	0.60	<0.067	**2.8**	<0.014	<0.013	<0.014	<0.012
Hexachlorobutadiene	1.63	7.49	---	<0.060	<0.079	<0.42	<0.19	<0.032	<0.035	<0.24	<0.037	<0.16	<0.24	<0.034	<0.032	<0.033	<0.029
Isopropylbenzene	---	---	---	<0.052	<0.068	<0.36	1.2	<0.027	<0.030	<0.20	0.049 J	<0.14	0.24 J	<0.029	<0.027	<0.029	<0.025
p-Isopropyltoluene	162	162	---	<0.049	<0.064	<0.34	0.53	<0.026	<0.029	<0.19	<0.030	<0.13	<0.19	<0.027	<0.026	<0.027	<0.023
2-Butanone (MEK)	28,400	28,400	1.6661	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	61.8	1150	0.0026	<0.22	<0.29	<1.5	<0.71	<0.12	<0.13	<0.86	<0.13	<0.59	<0.87	<0.12	<0.12	<0.12	<0.11
Naphthalene	5.52	24.1	0.6582	<0.045	<0.059	<0.31	<0.15	0.089	<0.026	<0.18	<0.028	<0.12	<0.18	<0.025	<0.029	<0.025	<0.022
n-Propylbenzene	---	---	---	<0.056	<0.064	<0.39	1.1	<0.029	<0.033	<0.19	<0.034	<0.15	<0.22	<0.031	<0.024	<0.031	<0.027
Styrene	867	867	0.22	<0.052	<0.068	<0.36	<0.17	<0.027	<0.030	<0.20	<0.032	<0.14	<0.21	<0.029	<0.029	<0.029	<0.025
Tetrachloroethene	33	145	0.0045	<0.050	<0.066	<0.34	<0.16	**0.041 J**	**0.038 J**	<0.20	<0.031	<0.13	<0.20	<0.028	<0.026	<0.028	<0.024
Toluene	818	818	1.1072	<0.020	<0.026	**1.3**	0.50	<0.010	<0.012	0.45	0.45	<0.054	**2.3**	0.030	<0.010	0.038	<0.0095
1,2,3-Trichlorobenzene	62.6	934	---	<0.062	<0.081	<0.43	<0.20	<0.032	<0.036	<0.24	<0.038	<0.17	<0.24	<0.035	<0.033	<0.034	<0.030
1,2,4-Trichlorobenzene	24	113	0.408	<0.046	<0.061	<0.32	<0.15	<0.024	<0.027	<0.18	<0.028	<0.12	<0.18	<0.026	<0.024	<0.025	<0.022
1,1,1-Trichloroethane	640	640	0.1402	**2.1**	**1.6**	**15**	**4.6**	**0.19**	**0.18**	**3.6**	**1.4**	**2.5**	**16**	0.14	0.13	<0.028	<0.025
1,1,2-Trichloroethane	1.59	7.01	0.0032	<0.047	<0.062	<0.33	<0.15	<0.025	<0.028	<0.19	<0.029	<0.13	<0.19	<0.027	<0.025	<0.026	<0.023
Trichloroethene	1.3	8.41	0.0036	**57**	**65**	**720**	**200**	**7.2**	**8.0**	**210**	**40**	**180**	**260**	**3.1**	**1.5**	**3.1**	**0.47**
Trichlorofluoromethane	1,230	1230	4.4758	<0.058	<0.076	<0.40	<0.19	<0.030	<0.034	<0.23	<0.035	<0.16	<0.23	<0.032*	<0.030*	<0.032*	<0.028*
1,2,3-Trimethylbenzene	182	182	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	219	219	---	<0.048	<0.063	<0.33	5.5	<0.025	<0.028	<0.19	<0.030	<0.13	0.69	<0.027	<0.025	<0.027	<0.023
1,3,5-Trimethylbenzene	182	182	---	<0.051	<0.067	<0.35	0.53	<0.027	<0.030	<0.20	<0.031	<0.14	<0.20	<0.029	<0.027	<0.028	<0.025
Trimethylbenzenes	---	---	1.3821	ND	ND	ND	**6.03**	ND	ND	ND	ND	ND	0.69	ND	ND	ND	ND
Vinyl Chloride	0.067	2.08	0.0001	<0.035	**2.1**	<0.24	**2.2**	<0.019	<0.021	<0.14	**0.080**	<0.096	**0.53**	<0.020*	<0.019*	<0.020*	<0.017*
m&p-Xylene	---	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	---	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes	260	260	3.96	0.12	1.2	7.8	2.2	0.061	<0.017	1.3	2.3	0.36	13	0.022 J	<0.016	<0.016	<0.014

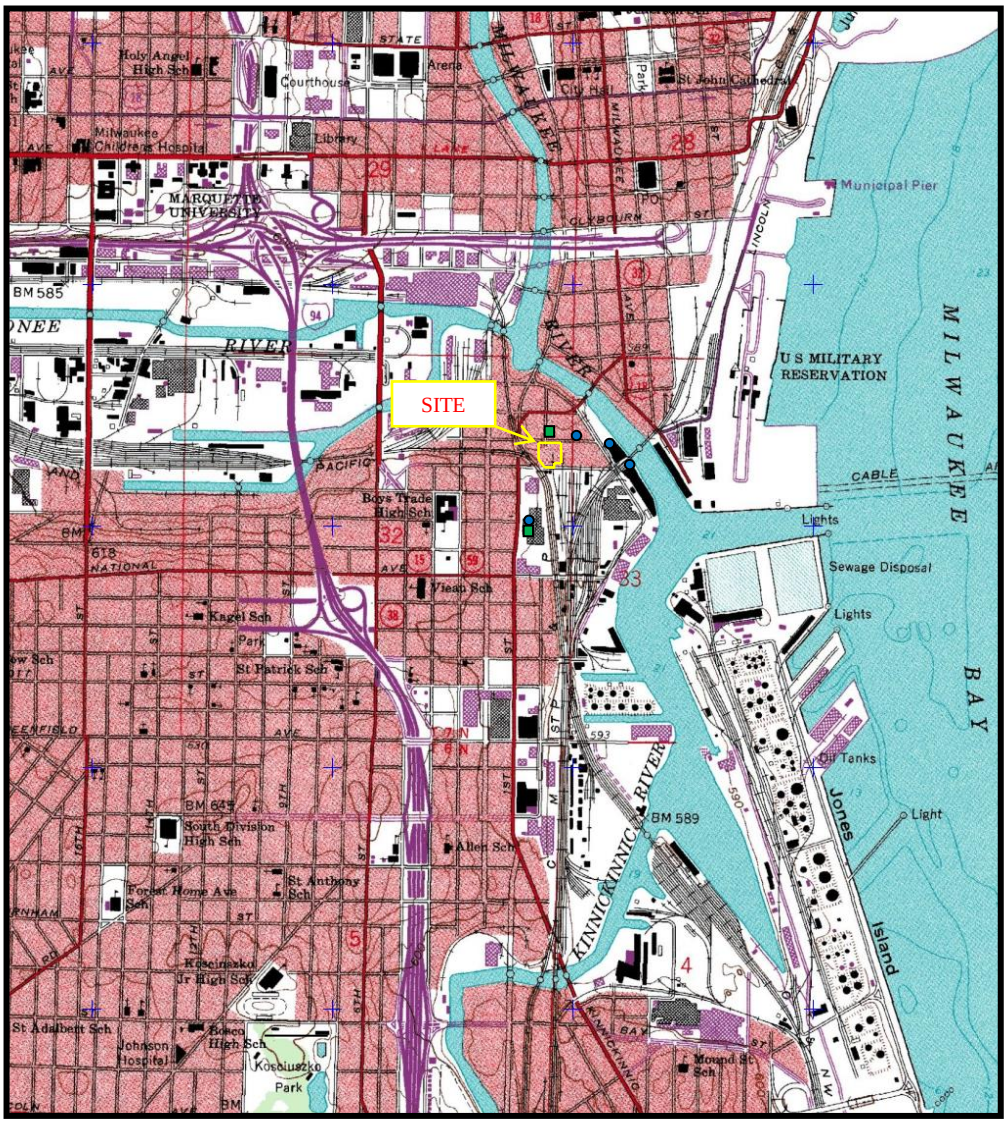
Bold values exceed protection of groundwater residual contaminant level
Boxed values exceed non-industrial direct contact residual contaminant level
Underlined values exceeded the background threshold value
--- - no standard established
J - Results between laboratory limit of detection and limit of quanitification
bgs - below ground surface
NA - not analyzed or not available
mg/kg - milligrams per kilogram
VOCs - volatile organic compounds

Table 1. Soil Analytical Results Under Building 34
Former Wayne Pigment Corp, 300 Barclay Street and 139 Oregon Street, Milwaukee

PARAMETERS	Non-Industrial Direct Contact Residual Contaminant Level	Industrial Direct Contact RCL (mg/kg)	Protection of Groundwater Residual Contaminant Level	Sample ID					
				V-28		V-29		V-30	
Date Collected				2/14/2017	2/14/2017	2/14/2017	2/14/2017	2/15/2017	2/15/2017
Depth (feet bgs)				4-6	6-8	4-6	6-8	4-6	6-8
Saturated(s)/Unsaturated(u)				s	s	s	s	s	s
VOCs (mg/kg)									
Benzene	1.6	7.07	0.0051	<0.013	<0.011	<0.010	<0.010	<0.010	**0.018**
Bromobenzene	342	679	---	<0.031	<0.028	<0.026	<0.025	<0.025	<0.025
Bromomethane	9.6	43	0.0051	<0.068	<0.062	<0.057	<0.056	<0.057	<0.056
n-Butylbenzene	108	108	---	<0.029	<0.026	<0.024	<0.024	<0.024	<0.023
sec-Butylbenzene	145	145	---	<0.034	<0.031	<0.029	<0.028	<0.028	<0.028
tert-Butylbenzene	183	183	---	<0.034	<0.031	<0.029	<0.028	<0.028	<0.028
Chlorobenzene	370	761	---	<0.033	<0.030	<0.028	<0.027	<0.027	<0.027
Chloroethane	---	---	0.2266	<0.043	<0.039	<0.036	<0.035	<0.036*	<0.035*
Chloroform	0.454	1.98	0.0033	<0.032	<0.029	<0.027	<0.026	<0.026	<0.026
1,1-Dichloroethane	5.06	22.2	0.4828	<0.035	<0.032	0.091	<0.029	0.052 J	0.21
1,2-Dichloroethane	0.652	2.87	0.0028	<0.034*	<0.031*	<0.028*	<0.028*	<0.028	<0.027
1,1-Dichloroethene	320	1,190	0.005	<0.033	<0.030	<0.028	<0.027	<0.028	<0.027
cis-1,2-Dichloroethene	156	2340	0.0412	<0.035	<0.032	**0.080**	<0.029	<0.029	**0.060 J**
trans-1,2-Dichloroethene	1,560	1850	0.0626	<0.030	<0.027	<0.025	<0.025	<0.025	<0.024
Di-isopropyl ether	2,260	2260	---	<0.024	<0.021	<0.020	<0.019	<0.020	<0.019
Ethylbenzene	8.03	35.4	1.57	<0.016	<0.014	<0.013	<0.013	<0.013	0.017
Hexachlorobutadiene	1.63	7.49	---	<0.038	<0.035	<0.032	<0.031	<0.032	<0.031
Isopropylbenzene	---	---	---	<0.033	<0.030	<0.028	<0.027	<0.027	<0.027
p-Isopropyltoluene	162	162	---	<0.031	<0.028	<0.026	<0.025	<0.026	<0.025
2-Butanone (MEK)	28,400	28,400	1.6661	NA	NA	NA	NA	NA	NA
Methylene chloride	61.8	1150	0.0026	<0.14	<0.13	<0.12	<0.11	<0.12	<0.11
Naphthalene	5.52	24.1	0.6582	<0.029	<0.026	<0.024	<0.024	<0.024	<0.023
n-Propylbenzene	---	---	---	<0.035	<0.032	<0.030	<0.029	<0.029	<0.029
Styrene	867	867	0.22	<0.033	<0.030	<0.028	<0.027	<0.027	<0.027
Tetrachloroethene	33	145	0.0045	<0.032	<0.029	<0.027	<0.026	<0.026	<0.026
Toluene	818	818	1.1072	<0.013	<0.011	0.015 J	<0.010	0.016 J	0.036
1,2,3-Trichlorobenzene	62.6	934	---	<0.039	<0.036	<0.033	<0.032	<0.033	<0.032
1,2,4-Trichlorobenzene	24	113	0.408	<0.029*	<0.027*	<0.025*	<0.024*	<0.024	<0.024
1,1,1-Trichloroethane	640	640	0.1402	<0.033	<0.030	0.14	<0.027	0.13	<0.027
1,1,2-Trichloroethane	1.59	7.01	0.0032	<0.030	<0.027	<0.025	<0.025	<0.025	<0.025
Trichloroethene	1.3	8.41	0.0036	**0.22**	<0.013	**2.0**	**0.23**	**0.79**	**0.53**
Trichlorofluoromethane	1,230	1230	4.4758	<0.037	<0.033	<0.031	<0.030	<0.030*	<0.030*
1,2,3-Trimethylbenzene	182	182	---	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	219	219	---	<0.031	<0.028	<0.026	<0.025	<0.025	<0.025
1,3,5-Trimethylbenzene	182	182	---	<0.033	<0.030	<0.027	<0.027	<0.027	<0.027
Trimethylbenzenes	---	---	1.3821	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.067	2.08	0.0001	**0.035 J**	**0.030 J**	<0.019	<0.018	<0.019*	<0.018*
m&p-Xylene	---	---	---	NA	NA	NA	NA	NA	NA
o-Xylene	---	---	---	NA	NA	NA	NA	NA	NA
Xylenes	260	260	3.96	0.022 J	<0.017	<0.016	<0.015	0.020 J	0.031 J

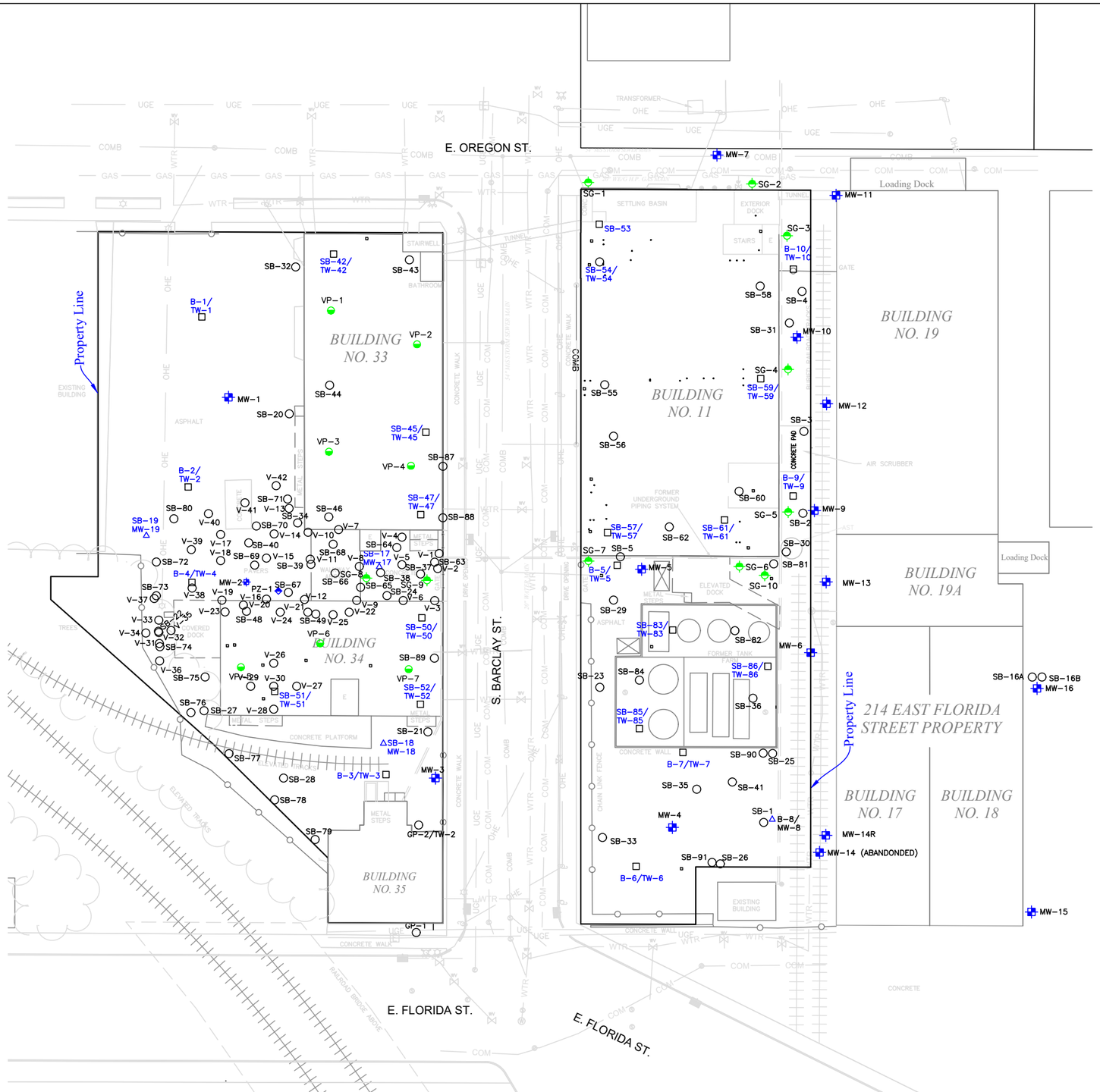
Bold values exceed protection of groundwater residual contaminant level
Boxed values exceed non-industrial direct contact residual contaminant level
Underlined values exceeded the background threshold value
--- - no standard established
J - Results between laboratory limit of detection and limit of quanitification
bgs - below ground surface
NA - not analyzed or not available
mg/kg - milligrams per kilogram
VOCs - volatile organic compounds

Figures



- Water Supply Well
- Test Boring

Location: Milwaukee, Wisconsin	Map Year: 1971	FIGURE 1 SITE LOCATION MAP WAYNE PIGMENT CORP 300 SOUTH BARCLAY STREET AND 139 EAST OREGON STREET MILWAUKEE, WISCONSIN	KEY ENGINEERING GROUP LTD.
Project: 2505019	Date: 2/3/2016		
N W E S	Scale: 1:24000		
	Series: 7.5 Minute Quadrangle		



LEGEND

- SOIL PROBE LOCATION
- TEMPORARY WELL / SOIL BORING
- MONITORING WELL / SOIL BORING
- PIEZOMETER LOCATION
- NEAR SLAB SOIL GAS LOCATION
- SUB-SLAB VAPOR POINTS
- MONITORING WELL LOCATION
- E ELEVATOR
- SUMP

SCALE IN FEET

50’ 0 50’

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE 6/29/17
DRAWN BY	RJN	DATE 6/29/17
APPROVED BY	KWW	DATE 6/29/17

CADFILE G:\ACAD\2505019 – 300 S Barclay st\2017-6-29\BASE FILE BIG.dwg
XREF
LMAN

FIGURE 2
SITE LAYOUT MAP
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019

SCALE 1” = 50’

SHEET NUMBER

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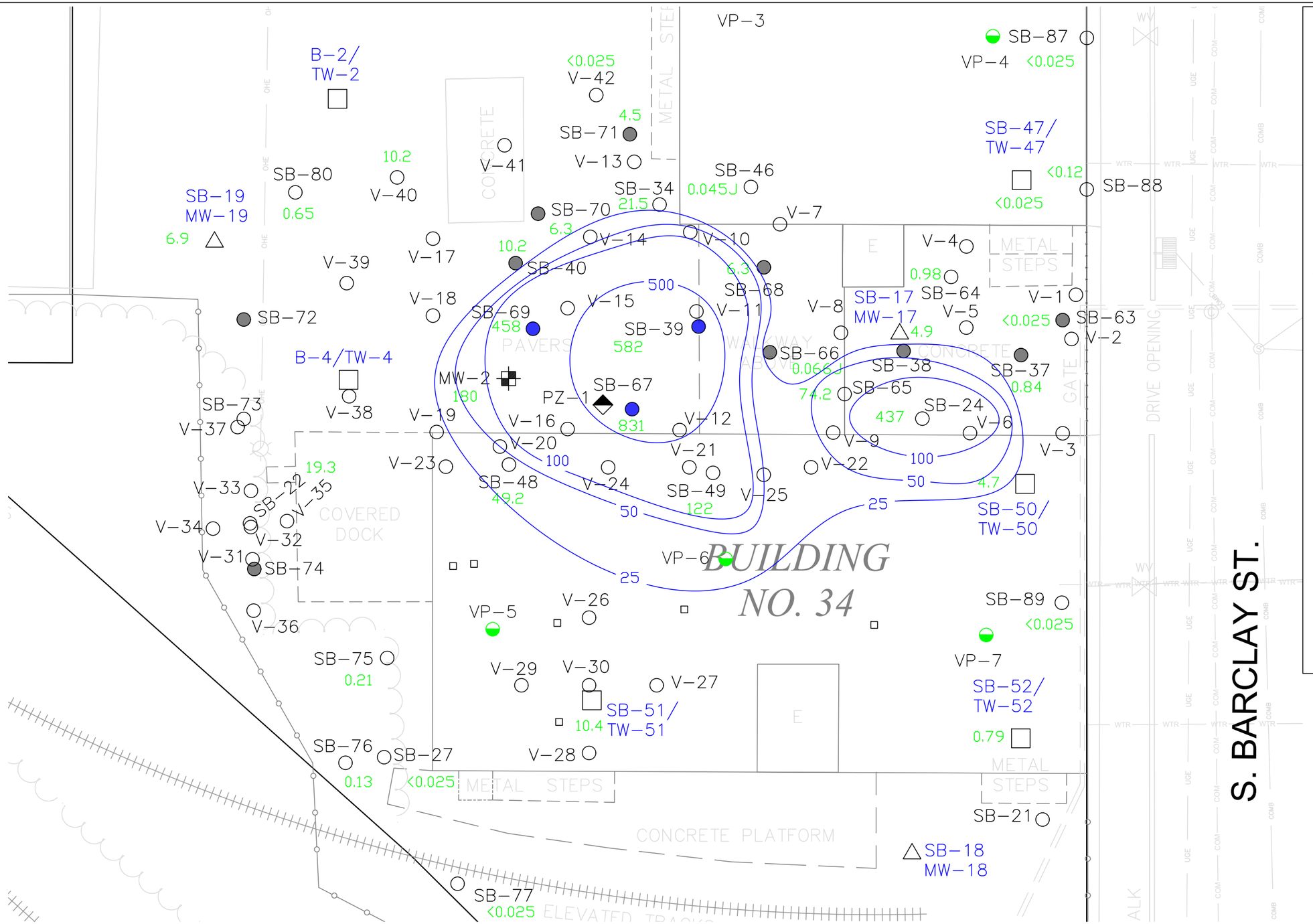

LEGEND

- SOIL PROBE LOCATION
- TEMPORARY WELL / SOIL BORING
- MONITORING WELL / SOIL BORING
- PIEZOMETER LOCATION
- SUB-SLAB VAPOR LOCATION
- MONITORING WELL LOCATION
- 4.5 SOIL TRICHLOROETHENE CONCENTRATION IN MILLIGRAMS PER KILOGRAM
- –25– ISOCONCENTRATION CONTOUR
- SOIL BORING WHERE TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR TRICHLOROETHENE WAS ABOVE 0.5 MILLIGRAMS PER LITER (CHARACTERISTICALLY HAZARDOUS).
- SOIL BORING WHERE TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR TRICHLOROETHENE WAS BELOW 0.5 MILLIGRAMS PER LITER (NOT CHARACTERISTICALLY HAZARDOUS).

SCALE IN FEET

15’ 0 15’

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE 6/29/17
DRAWN BY	RJN	DATE 6/29/17
APPROVED BY	KWW	DATE 6/19/17

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FIGURE 3
SOIL TRICHLOROETHENE ISOCONCENTRATION MAP LESS THAN 4 FEET
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019
SCALE 1” = 15’
SHEET NUMBER

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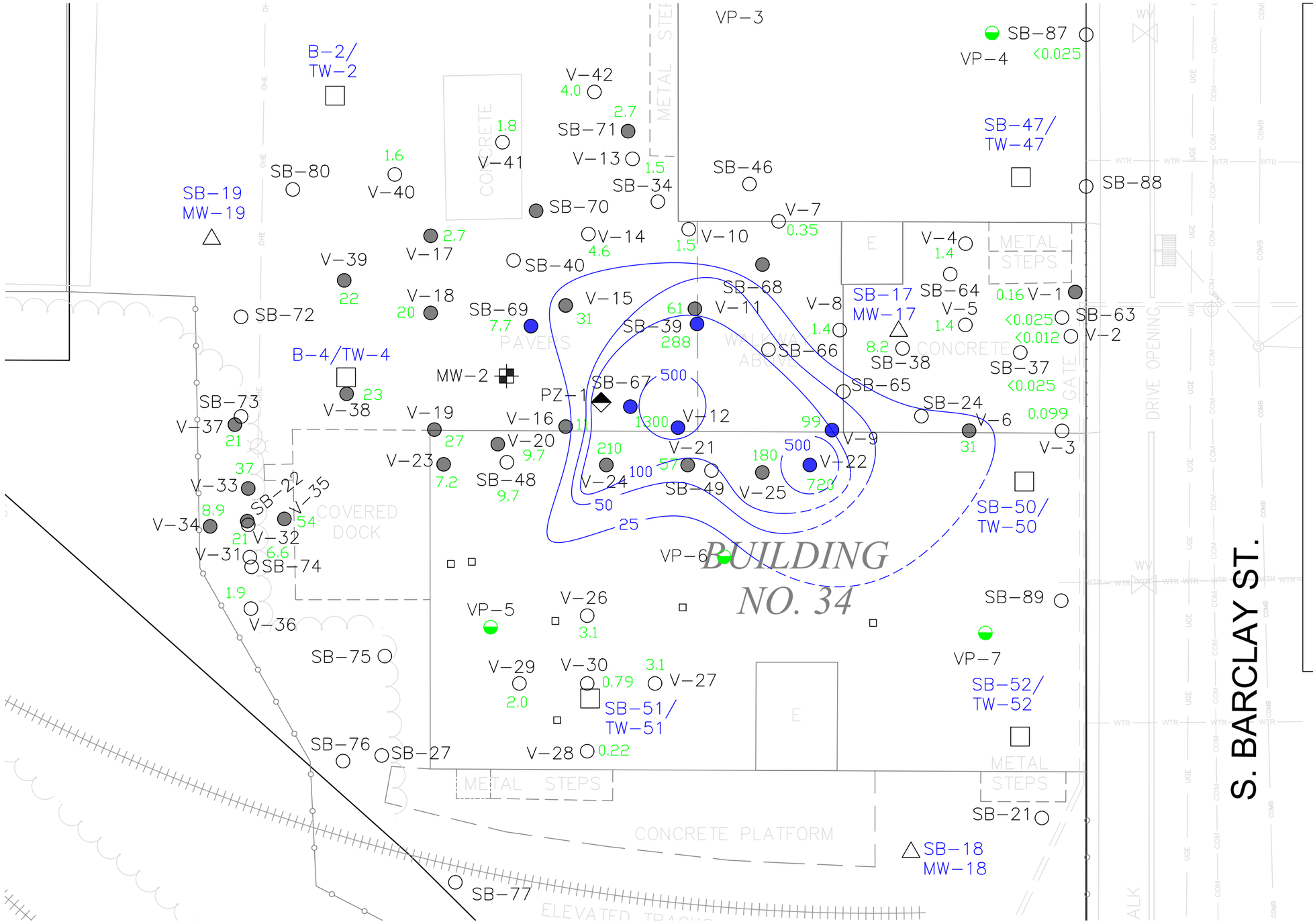

LEGEND

- SOIL PROBE LOCATION
- TEMPORARY WELL / SOIL BORING
- MONITORING WELL / SOIL BORING
- PIEZOMETER LOCATION
- SUB-SLAB VAPOR LOCATION
- MONITORING WELL LOCATION
- 8.2 SOIL TRICHLOROETHENE CONCENTRATION IN MILLIGRAMS PER KILOGRAM
- -25- ISOCONCENTRATION CONTOUR
- SOIL BORING WHERE TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR TRICHLOROETHENE WAS ABOVE 0.5 MILLIGRAMS PER LITER (CHARACTERISTICALLY HAZARDOUS).
- SOIL BORING WHERE TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR TRICHLOROETHENE WAS BELOW 0.5 MILLIGRAMS PER LITER (NOT CHARACTERISTICALLY HAZARDOUS).

SCALE IN FEET

15' 0 15'

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE	6/29/17
DRAWN BY	RJN	DATE	6/29/17
APPROVED BY	KWW	DATE	6/29/2017

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XREF
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FIGURE 4
SOIL TRICHLOROETHENE ISOCONCENTRATION MAP (4-6')
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
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KEY PROJECT NUMBER 2505019
SCALE 1" = 15'
SHEET NUMBER

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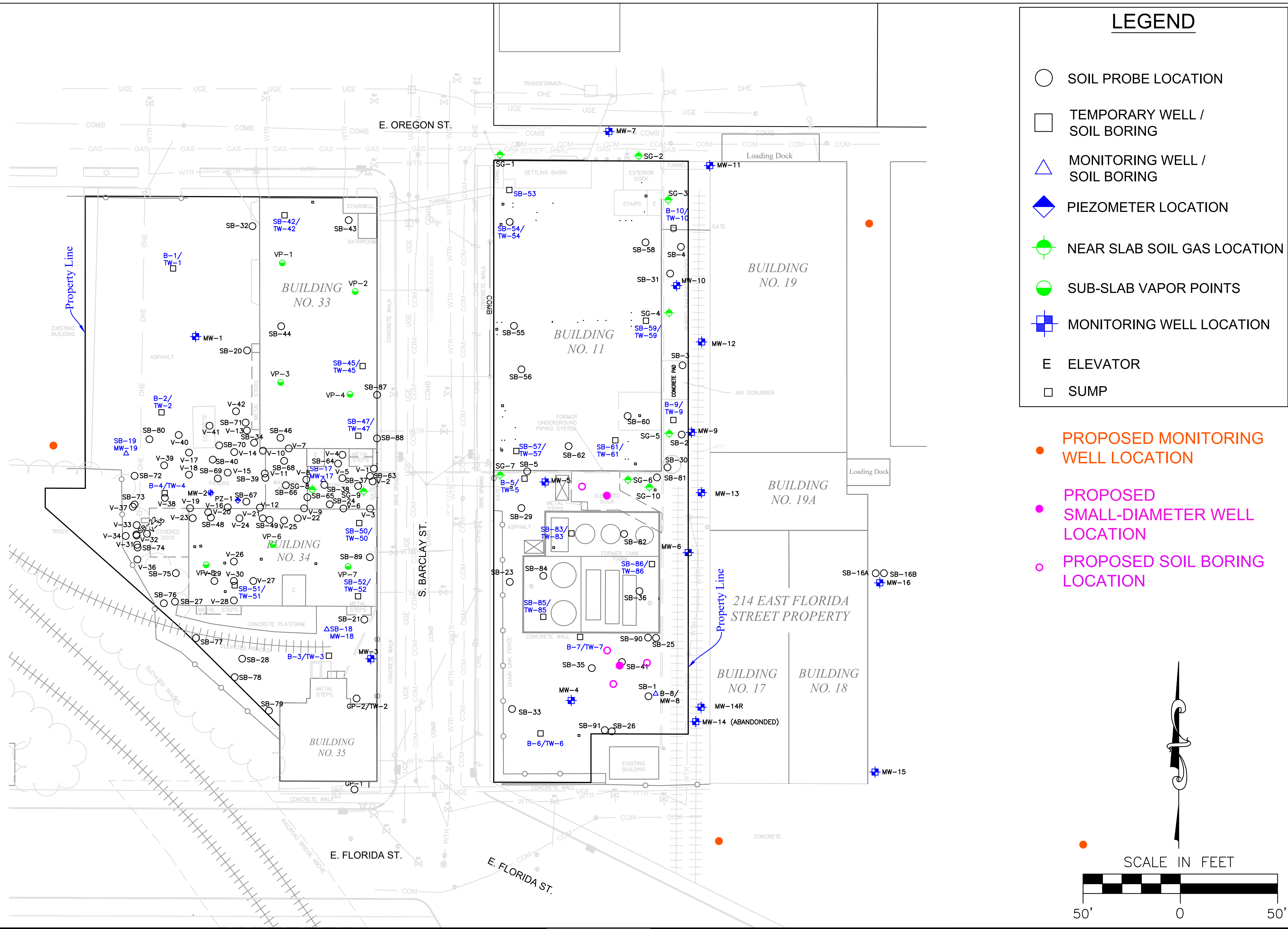

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY: TLS — DATE: 6/29/17
DRAWN BY: RJN — DATE: 6/29/17
APPROVED BY: KWW — DATE: 6/29/17
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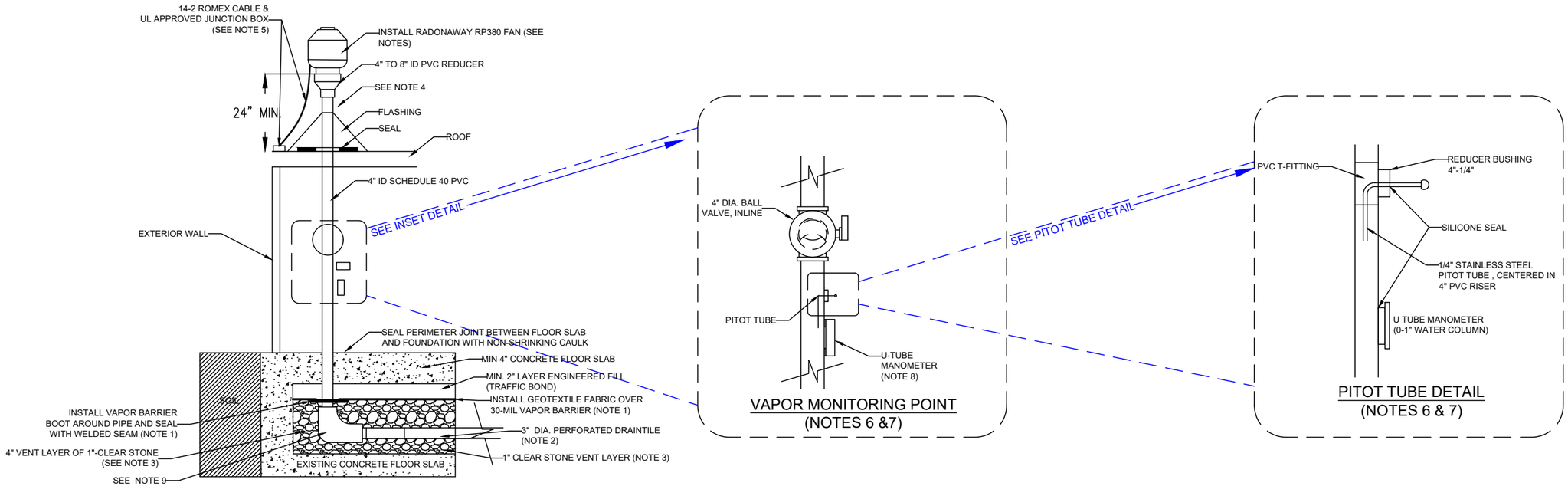
LMAN

FIGURE 5
SITE LAYOUT MAP
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) • 414.224.8383 (fax)

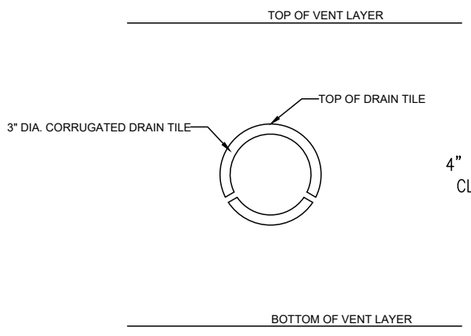
KEY PROJECT NUMBER: 2505019
SCALE: 1" = 50'
SHEET NUMBER



ROOF VENT PIPE AND SLAB PENETRATION DETAIL

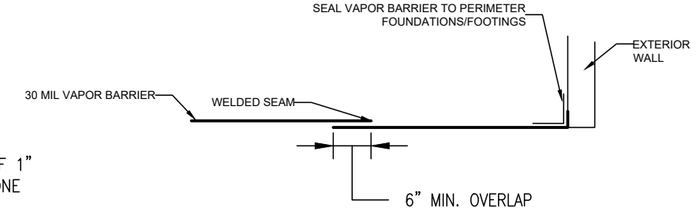
VAPOR MONITORING POINT (NOTES 6 &7)

PITOT TUBE DETAIL (NOTES 6 & 7)

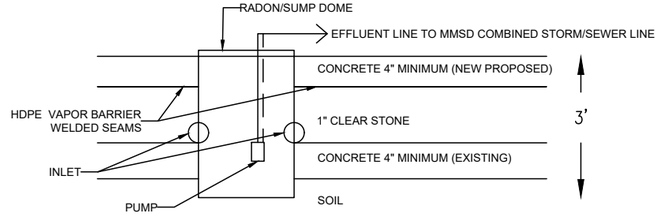


SUB-SLAB PERFORATED VENT PIPE

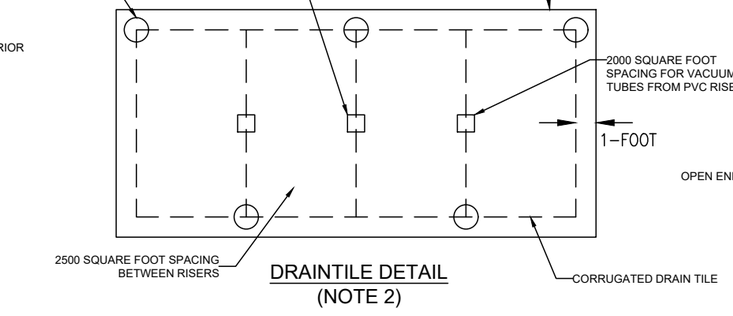
RADON/SUMP DOME SEALED



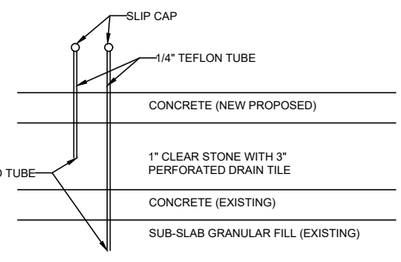
VAPOR BARRIER SEAM



SUMP DETAIL



DRAINTILE DETAIL (NOTE 2)



VACUUM POINT DETAIL

NOTES:

1. FOLLOW MANUFACTURER DIRECTIONS TO INSTALL 30-MIL WELDED-SEAM HDPE VAPOR BARRIER. INSTALL 6 OZ. NON-WOVEN GEOTEXTILE FABRIC ABOVE VAPOR BARRIER TO PROVIDE PROTECTION FOR BARRIER. ALL NEW CONCRETE FLOOR PENETRATIONS SHOULD HAVE A VAPOR BARRIER BOOT AROUND PIPE AND SEAL WITH VAPOR BARRIER TAPE.
2. INSTALL 3" DIAMETER CORRUGATED DRAIN TILE AS SHOWN ON DETAIL. FOR PIPE PERFORATION MAINTAIN UNIFORM PIPE ELEVATION FOR EACH SEPARATE PIPING RUN.
3. METHANE VENT LAYER SHALL BE 1-INCH CLEAR STONE.
4. LOCATE EXTERIOR GAS VENTS MIN 10' FROM AIR INTAKES OR OTHER OPENINGS SUCH AS WINDOWS AND DOORS.
5. INSTALL RADONAWAY RP380 FAN (8" DIAMETER). LICENSED ELECTRICIAN REQUIRED FOR INSTALLATION. EACH FAN SHOULD HAVE ITS OWN CIRCUIT BREAKER. FOR POWER FEED, USE 14-2 ROMEX CABLE TO SINGLE GANG UL LISTED JUNCTION BOX AT ROOF LEVEL. ONE FAN PER 2,500 SQUARE FOOT OF FIRST FLOOR SPACE. BUILDING 11 WILL HAVE 7 FANS.
6. INTERIOR VENT PIPE SECTIONS SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR LEVEL. LABEL SHALL READ "SUB-SLAB VENT SYSTEM".
7. INSTALL METAL ACCESS PLATE ON INTERIOR WALL TO ACCESS EACH VAPOR MONITORING POINT AND PAIRED VACUUM TUBES.
8. INSTALL A U-TUBE MANOMETER TYPE PRESSURE GAUGE ON VERTICAL VENT PIPE RUN, INSIDE INTERIOR WALLS, INLINE WITH BALL VALVE AND COMPRESSION FITTING, WITHIN WALL RECEPTACLE BOX WITH REMOVABLE COVER.
9. USE 90 DEGREE PVC ELBOW TO CONNECT 4" SCH 40 PVC TO PVC CORRUGATED DRAIN TILE.

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE 6/29/17
DRAWN BY	RJN	DATE 6/29/17
APPROVED BY	KWW	DATE 6/29/17

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XREF
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FIGURE 6
BULDING 11 ACTIVE VAPOR MITIGATION SYSTEM DESIGN
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET & 139 EAST OREGON STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019
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SHEET NUMBER

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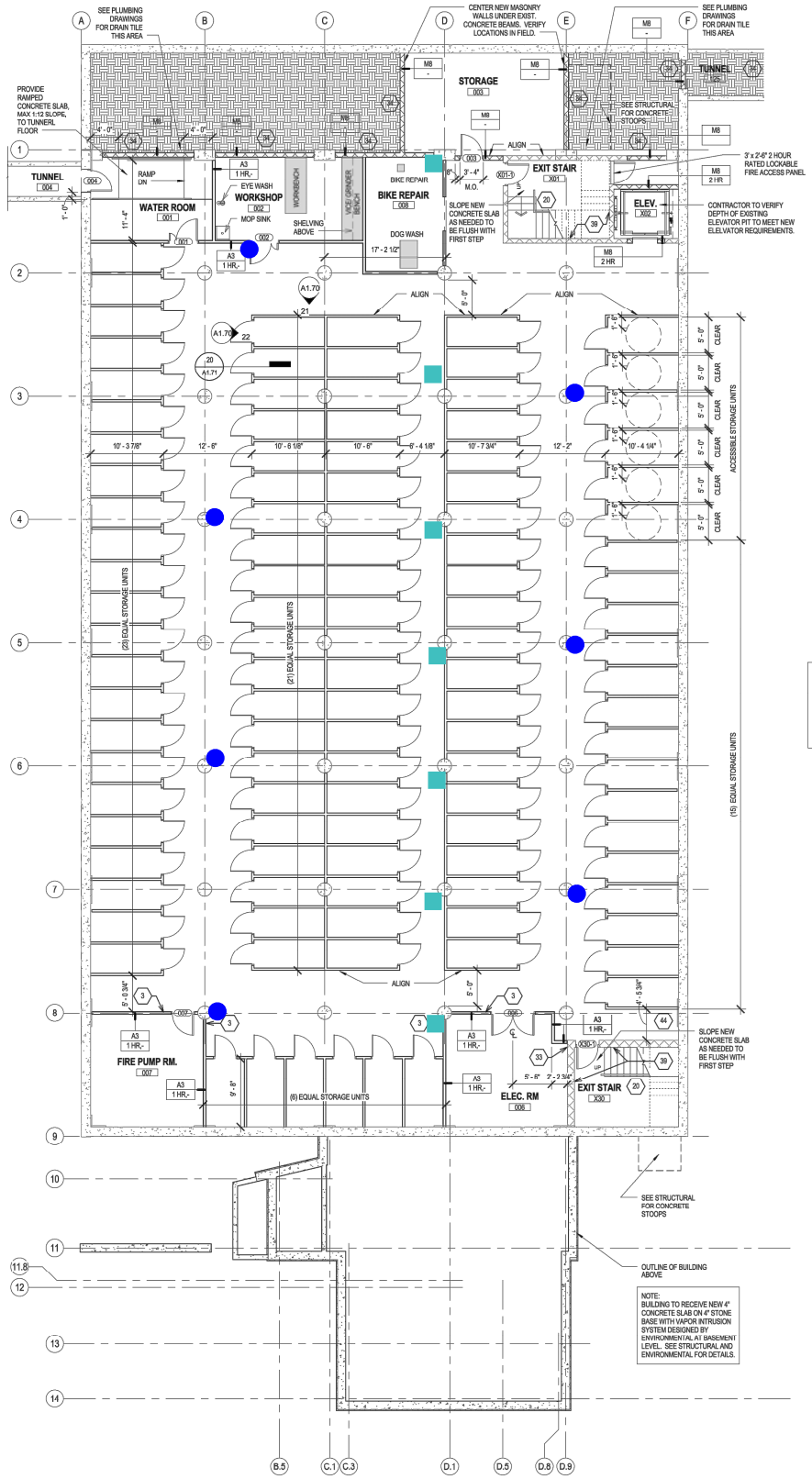
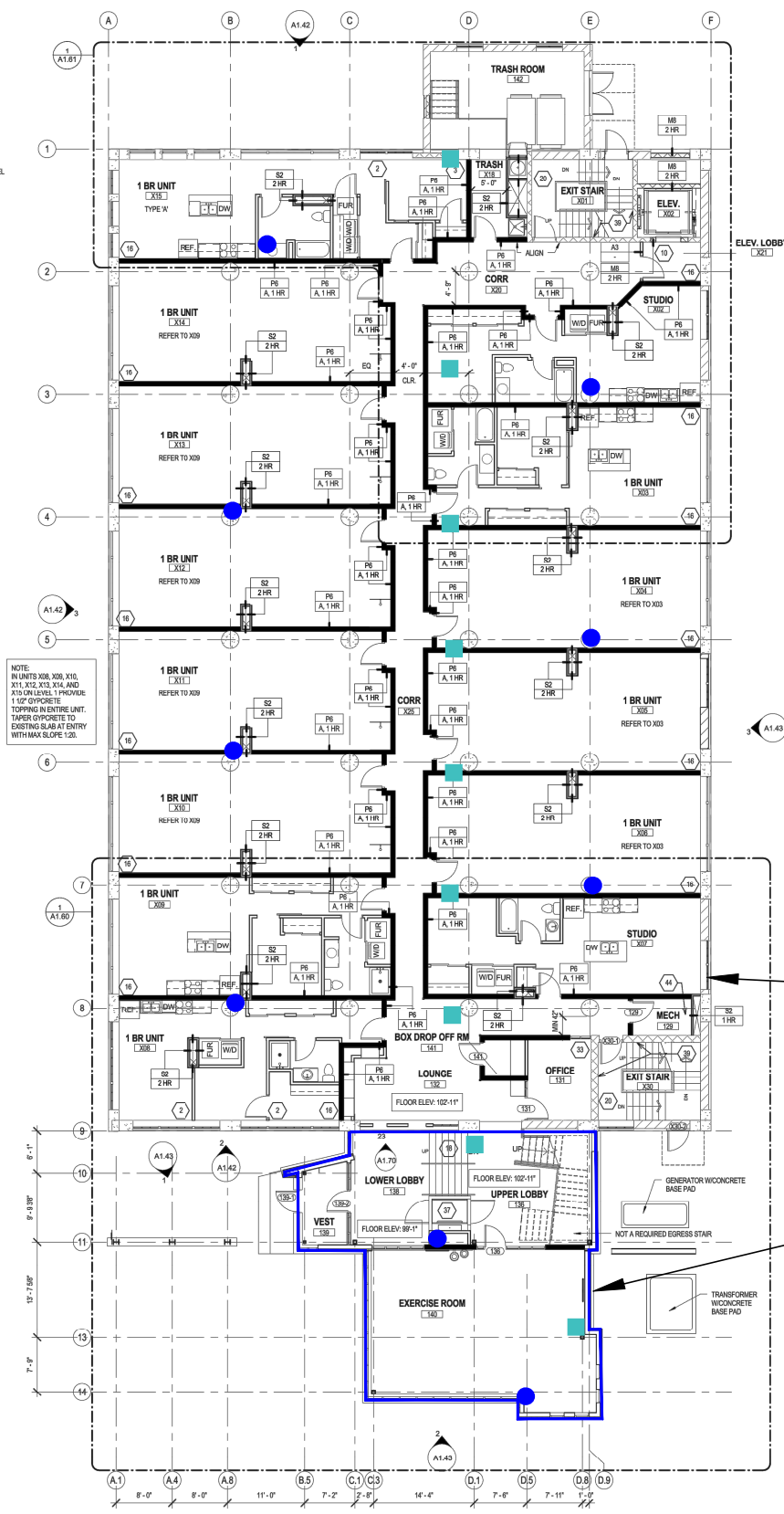


2 NEW WORK PLAN - BASEMENT LEVEL - EAST BUILDING
Scale: 1/8" = 1'-0"



1 NEW WORK PLAN - LEVEL 1 - EAST BUILDING
Scale: 1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES TO CONTRACTOR

1. THIS DRAWING IS FURTHER SUPPORTED BY INFORMATION CONTAINED IN THE SPECIFICATION MANUAL.
2. THE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AUDIO-VISUAL, AND SECURITY DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE INFORMATION CONTAINED IN ALL THE DRAWINGS BEFORE THE INSTALLATION OF ALL WORK.
3. DO NOT SCALE DRAWINGS. CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO COMMENCING CONSTRUCTION.
4. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF THE FINISHED FLOOR MATERIAL UNLESS OTHERWISE NOTED.
5. CONTRACTORS SHALL JOINTLY PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACKING PLATES, WALL BLOCKING AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF CASEWORK, TOILET ACCESSORIES, PARTITIONS, MILLWORK, AND ALL WORK MOUNTED OR SUSPENDED BY ALL TRADES.
6. SEE SHEET A0.02 FOR PARTITION TYPES AND DETAILS.
7. DIMENSIONS AT EXTERIOR WALLS ARE TO STRUCTURAL WALL ONLY AND DO NOT INCLUDE FINISHES.

NEW WORK LEGEND

- EXISTING TO REMAIN
- MASONRY PARTITION, SEE PARTITION TYPES FOR DETAILS
- RATED CORRIDOR AND UNIT DEMISING PARTITION, SEE PARTITION TYPES FOR DETAILS
- NEW WORK KEY NOTE

NEW WORK PLAN KEY NOTES

SEE PROJECT GENERAL CONDITIONS, GENERAL INFORMATION ON SHEET A001 AND SELECTIVE DEMOLITION, CUTTING AND PATCHING SPECIFICATIONS THAT ARE USED IN ASSOCIATION WITH THESE NOTES.

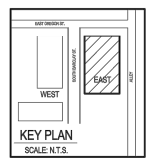
NEW WORK PLAN KEY NOTES APPLY TO ALL NEW WORK DRAWINGS AND MAY NOT BE USED ON EVERY SHEET.

1	PROVIDE EXTRA 1/2" LAYER OF GWB AT ALL FIRE RATED PARTIONS SURROUNDING BATHTUBS AND SHOWERS
2	ALIGN PARTITION WITH CENTER OF WINDOW MULLION.
3	ALIGN CENTER OF WALL WITH COLUMN GRID LINE EXISTING
4	WALLS TO EXTEND TO 4'-0" A.F.F. FINISH TOP OF LEDGE WITH GWV AND PAINT PT-1
5	SHAFT OPENING, COORDINATE WITH MEP AND STRUCTURAL DRAWINGS
6	SEE A0.01 FOR IN-WALL BLOCKING REQUIREMENTS AT SHOWERS AND BATHTUBS
7	EXISTING MASONRY WALL TO REMAIN EXPOSED AND UNPAINTED
8	MECHANICAL SHAFT. PROVIDE 2-HR RATED SHAFT WALL SU ALL AROUND THE ACOUSTIC INSULATION. ALIGN FINISH FACES OF GWB ON ADJACENT WALLS. COORDINATE EXACT SIZE AND REQUIREMENTS WITH MECHANICAL DRAWINGS. SHAFT TO TERMINATE ABOVE FIRST FLOOR CEILINGS IN UNITS. COORDINATE SHAFT OPENINGS WITH STRUCTURAL DRAWINGS.
9	ROOM TO BE ABANDONED. ALL EXISTING CONDITIONS/FINISHES TO REMAIN AS IS.
10	INFILL WALL OPENING, AS NEEDED, TO ACCOMODATE ELEVATOR DOOR. V.I.F.
11	INFILL WALL OPENING BETWEEN LEVEL 1 AND LEVEL 2.
12	INFILL ALL OPENINGS BETWEEN BOX LIGHT AND PENTHOUSE WALL WITH FIRE RATED CMU. LOCATIONS ARE DIAGRAMMATIC, VERIFY IN FIELD. SEE 1/A1.24 AND 1/A1.71.
13	NEW EXHAUST FAN. COORDINATE LOCATION WITH MECHANICAL.
14	INFILL EXISTING OPENING WITH CMU MASONRY INFILL SET BACK 1" FROM EXTERIOR FACE OF ADJACENT WALL
15	NEW GRATED STEEL STAIR ASSEMBLY WITH 42" HIGH GUARDRAILS GR-1 AND ASSOCIATED HANDRAILS. TYP. FOR STAIRS IN BUILDING 11 SEE DETAILS ON SHEET A1.75. FOR STAIRS IN BUILDINGS 33 & 34 SEE DETAILS ON SHEET A2.75.
16	ALIGN FACE OF WALL WITH EDGE OF CONCRETE COLUMN.
17	4" DEEP ALUMINUM FRAMED STOREFRONT SYSTEM, 9'-0" TALL, W/ 1/4" TEMPERED CENTER GLAZING, TYP.
18	CONCRETE FILLED METAL PAN STAIR SYSTEM, WITH METAL HANDRAIL.
19	ADDITIONAL LAYER 5/8" GYP. BD.
20	PROVIDE NEW METAL GUARDRAIL GR-2 SURFACE MOUNTED TO OPEN SIDE OF STAIRS AND LANDINGS. EXISTING HANDRAIL TO REMAIN. FOR STAIRS IN BUILDING 11 SEE DETAILS ON SHEET A1.75. FOR STAIRS IN BUILDINGS 33 & 34 SEE DETAILS ON SHEET A2.75.
21	REPAIR & CLEAN EXIST. WINDOW ASSY. REPLACE EXIST. BROKEN GLAZING, PROVIDE INSULATED METAL PANEL ON INSIDE OF WINDOW
22	INFILL OPENING WITH BRICK TO MATCH EXISTING. RECESS BRICK 1" FROM FACE OF EXISTING BRICK WALL. TYP.
23	EXISTING CONCRETE TOPPING TO BE MODIFIED AND SLOPED AS NEEDED TO MATCH ELEVATION AT ELEVATOR LANDING.
24	EXISTING METAL STAIR TO REMAIN, PAINT PT-X TYP.
25	PAINTED 1 1/2" DIAMETER STEEL FLOOR-MOUNTED HANDRAIL W/ 1'-0" EXTENSIONS AT TOP & BOTTOM. MOUNT TOP OF HANDRAIL 36" ABOVE STAIR TREAD.
26	CONCRETE FLOOR SLAB W/ EPDM WATER PROOF MEMEBRANE. FLASHING. AND WOOD DECK FOR WATER TIGHT BALCONY FLOOR. TYP.
27	REPAIR/PATCH EXIST. CONCRETE ROOF EDGE @ PENTHOUSE.
28	METAL STUD WALL 42" HIGH WITH WOOD WALL CAP. FINISH TO MATCH ADJACENT STAIR TREADS AND RAILING.
29	INSTALL SALVAGED DOUBLE DOOR AND DOOR CLOSER. SCRAPE LOOSE PAINT, CLEAN AND PAINT PT-X.
30	PROVIDE 18" DEEP EPOXY COATED WIRE SHELVING WITH METAL CLOSET POLE TO HANG CLOTHES IN ALL CLOSETS, TYP. AT ADA UNITS PROVIDE 3'-0" SECTION METAL CLOSET POLE NOT HIGHER THAN 54".
31	FEATHER NEW GYP-CRETE AS NEEDED TO MATCH ELEVATION AT ELEVATOR LANDING. SCC FINISH SCHEDULE FOR FLOOR FINISH.
32	NEW PRIMED AND PAINTED 42" TALL STEEL GUARDRAIL, SEE DETAIL 6/A2.75.
33	REPAIR EXIST. MASONRY WALL TO MAINTAIN 2 HR. FIRE RATING.
34	NEW 2" RIGID INSULATION OVER DRAINAGE PANELS AND DAMP PROOFING OVER NEW 8" MASONRY WALL
35	NEW STEEL AND WOOD STAIR ASSEMBLY WITH OPEN RISERS AND 36" HIGH HANDRAIL/GUARDRAIL GR-3 ON BOTH SIDES. SEE DETAILS ON SHEET A2.75. MAINTAIN 3'-0" CLEAR AT WALKING SURFACE.
36	NEW AUX DRAINAGE FROM ROOF.
37	ADA COMPLIANT ENCLOSED PLATFORM LIFT W/RECESSED PIT. SHAFTWAY WALLS TO TERMINATE AT 42" MIN. ABOVE UPPER LOBBY LEVEL WITH EQUAL HEIGHT ENTRY/EXIT DOOR AT UPPER LOBBY LEVEL. DOORS PROVIDED BY LIFT MANUFACTURER.
38	NEW 20 GA. SS CHUTE SLIDE EXTENSION, FIELD MEASURE AND FABRICATE TO FIT AROUND TRASH CHUTE.
39	PATCH ALL PENETRATIONS IN EXISTING STAIR SHAFT & ELEVATOR. WALLS TO MAINTAIN 2 HR FIRE RESISTANCE RATING.
40	PROVIDE NEW METAL AND WOOD GUARDRAIL GR-4 MOUNTED TO BOTH SIDES OF STAIRS AND LANDINGS. SEE ELEVATIONS AND DETAILS FOR GUARDRAIL AND STAIR CONSTRUCTION ON SHEET A1.75.
41	INFILL EXISTING OPENING WITH CMU MASONRY AND BRICK. BRICK INFILL ON EXTERIOR FACE TO RF SFT BACK 1" FROM EXTERIOR FACE OF ADJACENT WALL. BRICK TO MATCH ADJACENT.
42	PRE-MANUFACTURED 18"(X)4"(X)4" RECESSED MEDICINE CABINET WITH MIRRORED DOOR (ALTERNATE). PROVIDE SURFACE MOUNTED AT RATED OR CORRIDOR WALLS.
43	PROVIDE ALLOWANCE FOR MOVEABLE KITCHEN ISLAND.
44	PROVIDE (2) 1" CONDUIT FROM CEILING IN BASEMENT LEVEL TO ROOF AREA FOR FUTURE USE. CAP CONDUIT TO BE WATER TIGHT.
45	EXISTING MASONRY BRICK SILL TO BE REBUILT/REPAIRED FOR NEW WINDOW INSTALLATION. PROVIDE CEMENTITIOUS CASTING/PARGING ON TOP OF SILL TO MATCH EXISTING, TYP. AT ALL WINDOWS.
46	PROVIDE (2) 1" CONDUIT FROM CEILING ON FIRST FLOOR TO ROOF AREA FOR FUTURE USE. CAP CONDUIT TO BE WATER TIGHT.

- EXAMPLE LOCATION OF VERTICAL PVC RISER (ROOF PENETRATION WITH FAN)
- EXAMPLE LOCATION OF WHERE VACUUM TUBES WOULD BE INSTALLED

BUILDING 11

NEW BUILDING



SCALE IN FEET
25' 0 25'

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE 6/29/17
DRAWN BY	RJN	DATE 6/29/17
APPROVED BY	KWW	DATE 6/29/17
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FIGURE 7
BUILDING 11 AND NEW BUILDING VAPOR MITIGATION SYSTEM FLOOR PLAN
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019
SCALE 1" = 50'
SHEET NUMBER

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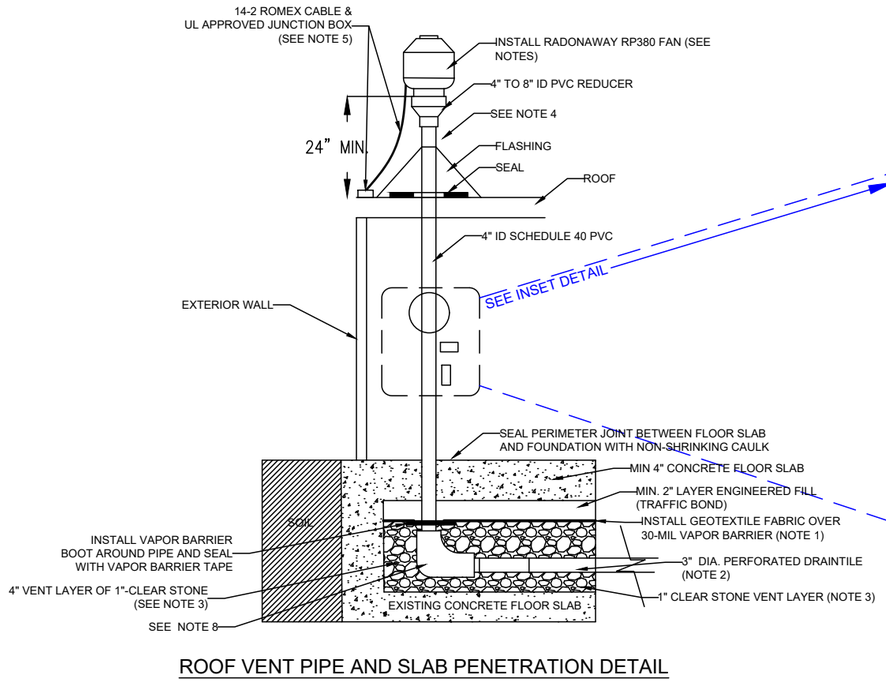
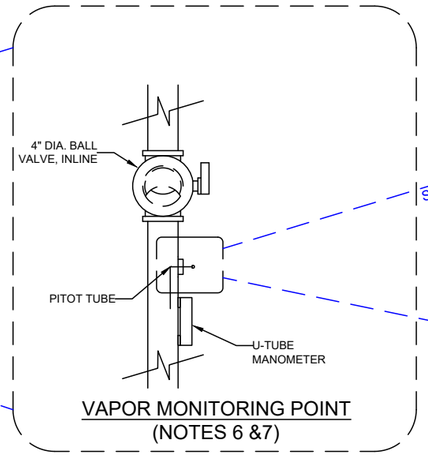
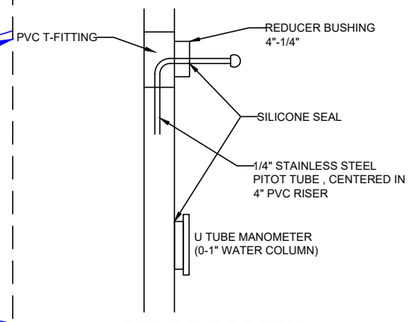


ROOF VENT PIPE AND SLAB PENETRATION DETAIL

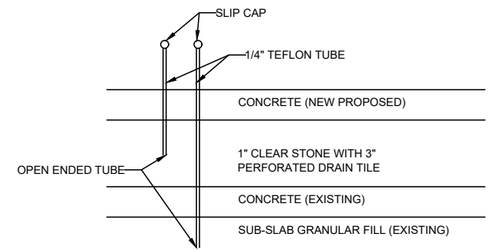


VAPOR MONITORING POINT
(NOTES 6 &7)

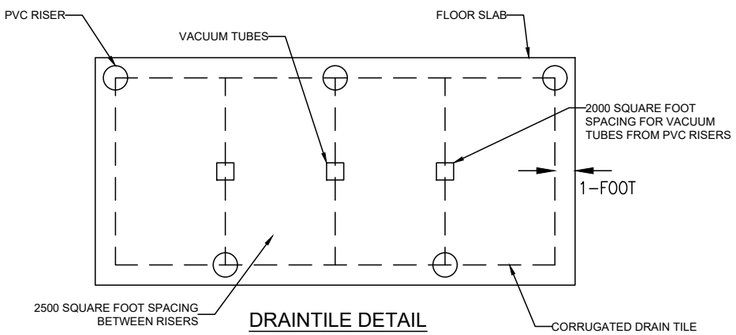
SEE PITOT DETAIL



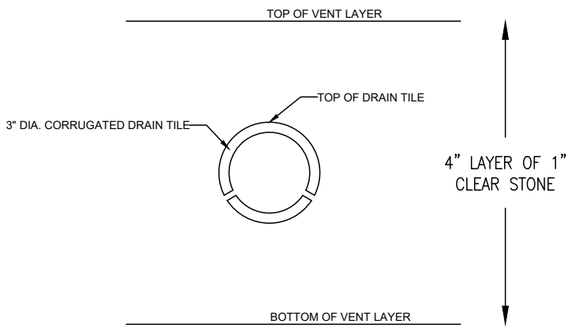
PITOT TUBE DETAIL
(NOTES 6 &7)



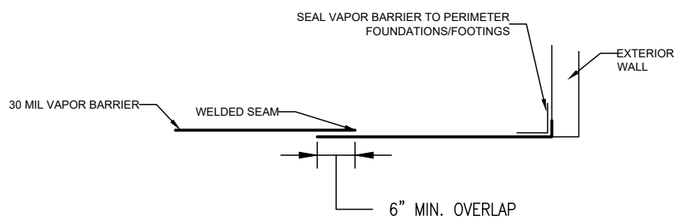
VACUUM POINT DETAIL



DRAINTILE DETAIL
(NOTE 2)



SUB-SLAB PERFORATED VENT PIPE



VAPOR BARRIER SEAM

NOTES:

1. FOLLOW MANUFACTURER DIRECTIONS TO INSTALL 30-MIL WELDED-SEAM HDPE VAPOR BARRIER. INSTALL 6 OZ. NON-WOVEN GEOTEXTILE FABRIC ABOVE VAPOR BARRIER TO PROVIDE PROTECTION FOR BARRIER. ALL NEW CONCRETE FLOOR PENETRATIONS SHOULD HAVE A VAPOR BARRIER BOOT AROUND PIPE AND SEAL WITH VAPOR BARRIER TAPE.

2. INSTALL 3" DIAMETER CORRUGATED DRAIN TILE AS SHOWN ON DETAIL. FOR PIPE PERFORATION MAINTAIN UNIFORM PIPE ELEVATION FOR EACH SEPARATE PIPING RUN.

3. METHANE VENT LAYER SHALL BE 1-INCH CLEAR STONE.

4. LOCATE EXTERIOR GAS VENTS MIN 10' FROM AIR INTAKES OR OTHER OPENINGS SUCH AS WINDOWS AND DOORS.

5. INSTALL RADONAWAY RP380 FAN (8" DIAMETER). LICENSED ELECTRICIAN REQUIRED FOR INSTALLATION. EACH FAN SHOULD HAVE ITS OWN CIRCUIT BREAKER. FOR POWER FEED, USE 14-2 ROMEX CABLE TO SINGLE GANG UL LISTED JUNCTION BOX AT ROOF LEVEL. ONE FAN PER 2,500 SQUARE FOOT OF FIRST FLOOR SPACE. BUILDINGS 33 AND 34 WILL HAVE 4 FANS EACH.

6. INTERIOR VENT PIPE SECTIONS SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR LEVEL. LABEL SHALL READ "SUB-SLAB VENT SYSTEM".

7. INSTALL METAL ACCESS PLATE ON INTERIOR WALL TO ACCESS EACH VAPOR MONITORING POINT AND PAIRED VACUUM TUBES.

8. INSTALL A U-TUBE MANOMETER TYPE PRESSURE GAUGE ON VERTICAL VENT PIPE RUN, INSIDE INTERIOR WALLS, INLINE WITH BALL VALVE AND COMPRESSION FITTING, WITHIN WALL RECEPTACLE BOX WITH REMOVABLE COVER.

9. USE 90 DEGREE PVC ELBOW TO CONNECT 4" SCH 40 PVC TO PVC CORRUGATED DRAIN TILE.

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FIGURE 8
BULDINGS 33 AND 34 ACTIVE VAPOR MITIGATION SYSTEM DESIGN
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET & 139 EAST OREGON STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
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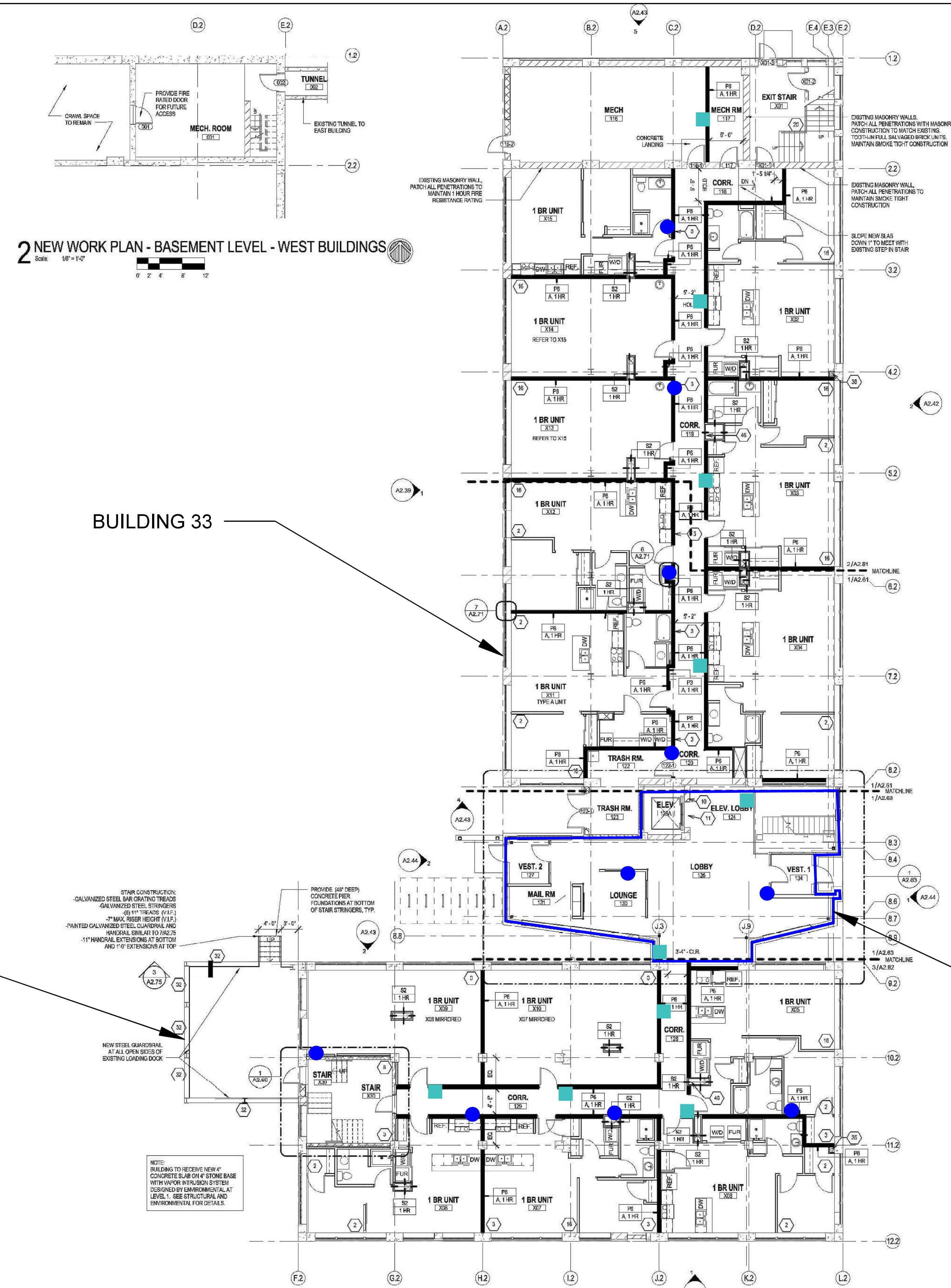
KEY PROJECT NUMBER 2505019
SCALE NTS
SHEET NUMBER



2 NEW WORK PLAN - BASEMENT LEVEL - WEST BUILDINGS
Scale: 1/8" = 1'-0"

1 NEW WORK PLAN - LEVEL 1 - WEST BUILDINGS
Scale: 1/8" = 1'-0"

EXAMPLE LOCATION OF VERTICAL PVC RISER (ROOF PENETRATION WITH FAN)

EXAMPLE LOCATION OF WHERE VACUUM TUBES WOULD BE INSTALLED

GENERAL FLOOR PLAN NOTES TO CONTRACTOR

1. THIS DRAWING IS FURTHER SUPPORTED BY INFORMATION CONTAINED IN THE SPECIFICATION MANUAL.
2. THE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AUDIO-VISUAL, AND SECURITY DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE INFORMATION CONTAINED IN ALL THE DRAWINGS BEFORE THE INSTALLATION OF ALL WORK.
3. DO NOT SCALE DRAWINGS. CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO COMMENCING CONSTRUCTION.
4. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF THE FINISHED FLOOR MATERIAL UNLESS OTHERWISE NOTED.
5. CONTRACTORS SHALL JOINTLY PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACKING PLATES, WALL BLOCKING AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF CASEWORK, TOILET ACCESSORIES, PARTITIONS. MILLWORK, AND ALL WORK MOUNTED OR SUSPENDED BY ALL TRADES.
6. SEE SHEET A0.02 FOR PARTITION TYPES AND DETAILS.
7. DIMENSIONS AT EXTERIOR WALLS ARE TO STRUCTURAL WALL ONLY AND DO NOT INCLUDE FINISHES.

NEW WORK LEGEND

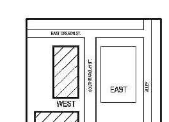
- EXISTING TO REMAIN
- MASONRY PARTITION, SEE PARTITION TYPES FOR DETAILS
- RATED CORRIDOR AND UNIT DEMISING PARTITION, SEE PARTITION TYPES FOR DETAILS
- (X) NEW WORK KEY NOTE

NEW WORK PLAN KEY NOTES

SEE PROJECT GENERAL CONDITIONS, GENERAL INFORMATION ON SHEET A001 AND SELECTIVE DEMOLITION, CUTTING AND PATCHING SPECIFICATIONS THAT ARE USED IN ASSOCIATION WITH THESE NOTES.

NEW WORK PLAN KEY NOTES APPLY TO ALL NEW WORK DRAWINGS AND MAY NOT BE USED ON EVERY SHEET.

1	PROVIDE EXTRA 1/2" LAYER OF GWB AT ALL FIRE RATED PARITIONS SURROUNDING BATHTUBS AND SHOWERS
2	ALIGN PARTITION WITH CENTER OF WINDOW MULLION.
3	ALIGN CENTER OF WALL WITH COLUMN GRID LINE EXISTING
4	WALLS TO EXTEND TO 4'-0" A.F.F. FINISH TOP OF LEDGE WITH GWV AND PAINT PT-1
5	SHAFT OPENING, COORDINATE WITH MEP AND STRUCTURAL DRAWINGS
6	SEE A0.01 FOR IN-WALL BLOCKING REQUIREMENTS AT SHOWERS AND BATHTUBS
7	EXISTING MASONRY WALL TO REMAIN EXPOSED AND UNPAINTED
8	MECHANICAL SHAFT. PROVIDE 2-HR RATED SHAFT WALL S2 ALL AROUND THE ACOUSTIC INSULATION. ALIGN FINISH FACES OF GWB ON ADJACENT WALLS. COORDINATE EXACT SIZE AND REQUIREMENTS WITH MECHANICAL DRAWINGS. SHAFT TO TERMINATE ABOVE FIRST FLOOR CEILINGS IN UNITS. COORDINATE SHAFT OPENINGS WITH STRUCTURAL DRAWINGS.
9	ROOM TO BE ABANDONED. ALL EXISTING CONDITIONS/FINISHES TO REMAIN AS IS.
10	INFILL WALL OPENING, AS NEEDED, TO ACCOMODATE ELEVATOR DOOR. V.I.F.
11	INFILL WALL OPENING BETWEEN LEVEL 1 AND LEVEL 2.
12	INFILL ALL OPENINGS BETWEEN SKYLIGHT AND PENTHOUSE WALL WITH FIRE RATED CMU. LOCATIONS ARE DIAGRAMMATIC, VERIFY IN FIELD. SEE 1/A1.24 AND 10/1.71.
13	NEW EXHAUST FAN. COORDINATE LOCATION WITH MECHANICAL
14	INFILL EXISTING OPENING WITH CMU MASONRY INFILL SET BACK 1" FROM EXTERIOR FACE OF ADJACENT WALL
15	NEW GRATED STEEL STAIR ASSEMBLY WITH 42" HIGH GUARDRAILS GR-1 AND ASSOCIATED HANDRAILS, TYP. FOR STAIRS IN BUILDING 11 SEE DETAILS ON SHEET A1.75. FOR STAIRS IN BUILDINGS 33 & 34 SEE DETAILS ON SHEET A2.75.
16	ALIGN FACE OF WALL WITH EDGE OF CONCRETE COLUMN.
17	4" DEEP ALUMINUM FRAMED STOREFRONT SYSTEM, 9'-0" TALL, W/ 1/4" TEMPERED CENTER GLAZING, TYP.
18	CONCRETE FILLED METAL PAN STAIR SYSTEM, WITH METAL HANDRAIL.
19	ADDITIONAL LAYER 5/8" GYP. BD.
20	PROVIDE NEW METAL GUARDRAIL GR-2 SURFACE MOUNTED TO OPEN SIDE OF STAIRS AND LANDINGS. EXISTING HANDRAIL TO REMAIN. FOR STAIRS IN BUILDING 11 SEE DETAILS ON SHEET A1.75. FOR STAIRS IN BUILDINGS 33 & 34 SEE DETAILS ON SHEET A2.75.
21	REPAIR & CLEAN EXIST. WINDOW ASSY. REPLACE EXIST. BROKEN GLAZING, PROVIDE INSULATED METAL PANEL ON INSIDE OF WINDOW
22	INFILL OPENING WITH BRICK TO MATCH EXISTING. RECESS BRICK 1" FROM FACE OF EXISTING BRICK WALL, TYP.
23	EXISTING CONCRETE TOPPING TO BE MODIFIED AND SLOPED AS NEEDED TO MATCH ELEVATION AT ELEVATOR LANDING.
24	EXISTING METAL STAIR TO REMAIN, PAINT PT-X TYP.
25	PAINTED 1 1/2" DIAMETER STEEL FLOOR-MOUNTED HANDRAIL W/ 1'-0" EXTENSIONS AT TOP & BOTTOM. MOUNT TOP OF HANDRAIL 36" ABOVE STAIR TREAD.
26	CONCRETE FLOOR SLAB W/ EPDM WATER PROOF MEMEBRANE, FLASHING, AND WOOD DECK FOR WATER TIGHT BALCONY FLOOR, TYP
27	REPAIR/PATCH EXIST. CONCRETE ROOF EDGE @ PENTHOUSE.
28	METAL STUD WALL 42" HIGH WITH WOOD WALL CAP, FINISH TO MATCH ADJACENT STAIR TREADS AND RAILING.
29	INSTALL SALVAGED DOUBLE DOOR AND DOOR CLOSER. SCRAPE LOOSE PAINT, CLEAN AND PAINT PT-X
30	PROVIDE 16" DEEP EPOXY COATED WIRE SHELVING WITH METAL CLOSET POLE TO HANG CLOTHES IN ALL CLOSETS. TYP. AT ADA UNITS PROVIDE 3'-0" SECTION METAL CLOSET POLE NOT HIGHER THAN 54".
31	FEATHER NEW GYP-CRETE AS NEEDED TO MATCH ELEVATION AT ELEVATOR LANDING. SEE FINISH SCHEDULE FOR FLOOR FINISH.
32	NEW PRIMED AND PAINTED 42" TALL STEEL GUARDRAIL, SEE DETAIL 6/A2.75.
33	REPAIR EXIST. MASONRY WALL TO MAINTAIN 2 HR. FIRE RATING.
34	NEW 2" RIGID INSULATION OVER DRAINAGE PANELS AND DAMP PROOFING OVER NEW 8" MASONRY WALL
35	NEW STEEL AND WOOD STAIR ASSEMBLY WITH OPEN RISERS AND 36" HIGH HANDRAIL/GUARDRAIL GR-3 ON BOTH SIDES. SEE DETAILS ON SHEET A2.75. MAINTAIN 8'-0" CLEAR AT WALKING SURFACE.
36	NEW AUX DRAINAGE FROM ROOF.
37	ADA COMPLIANT ENCLOSED PLATFORM LIFT W/RECESSED PIT. SHAFTWAY WALLS TO TERMINATE AT 42" MIN. ABOVE UPPER LOBBY LEVEL WITH EQUAL HEIGHT ENTRY/EXIT DOOR AT UPPER LOBBY LEVEL. DOORS PROVIDED BY LIFT MANUFACTURER.
38	NEW 20 GA. SS CHUTE SLIDE EXTENSION, FIELD MEASURE AND FABRICATE TO FIT AROUND TRASH CHUTE.
39	PATCH ALL PENETRATIONS IN EXISTING STAIR SHAFT & ELEVATOR. WALLS TO MAINTAIN 2 HR FIRE RESISTANCE RATING.
40	PROVIDE NEW METAL AND WOOD GUARDRAIL GR-4 MOUNTED TO BOTH SIDES OF STAIRS AND LANDINGS. SEE ELEVATIONS AND DETAILS FOR GUARDRAIL AND STAIR CONSTRUCTION ON SHEET A1.75.
41	INFILL EXISTING OPENING WITH CMU MASONRY AND BRICK. BRICK INFILL ON EXTERIOR FACE TO BE SET BACK 1" FROM EXTERIOR FACE OF ADJACENT WALL. BRICK TO MATCH ADJACENT.
42	PRE-MANUFACTURED 18"X24"X4" RECESSED MEDICINE CABINET WITH MIRRORED DOOR (ALTERNATE). PROVIDE SURFACE MOUNTED AT RATED OR CORRIDOR WALLS.
43	PROVIDE ALLOWANCE FOR MOVEABLE KITCHEN ISLAND.
44	PROVIDE (2) 1" CONDUIT FROM CEILING IN BASEMENT LEVEL TO ROOF AREA FOR FUTURE USE. CAP CONDUIT TO BE WATER TIGHT.
45	EXISTING MASONRY BRICK SILL TO BE REBUILT/REPAIRED FOR NEW WINDOW INSTALLATION. PROVIDE CEMENTITIOUS CASTING/PARGING ON TOP OF SILL TO MATCH EXISTING, TYP. AT ALL WINDOWS.
46	PROVIDE (2) 1" CONDUIT FROM CEILING ON FIRST FLOOR TO ROOF AREA FOR FUTURE USE. CAP CONDUIT TO BE WATER TIGHT.



KEY PLAN
SCALE: N.T.S.

SCALE IN FEET
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REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE	6/29/17
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APPROVED BY	KWW	DATE	6/29/17

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FIGURE 9
BUILDINGS 33, 34 AND NEW BUILDING VAPOR MITIGATION SYSTEM FLOOR PLANS
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) • 414.224.8383 (fax)

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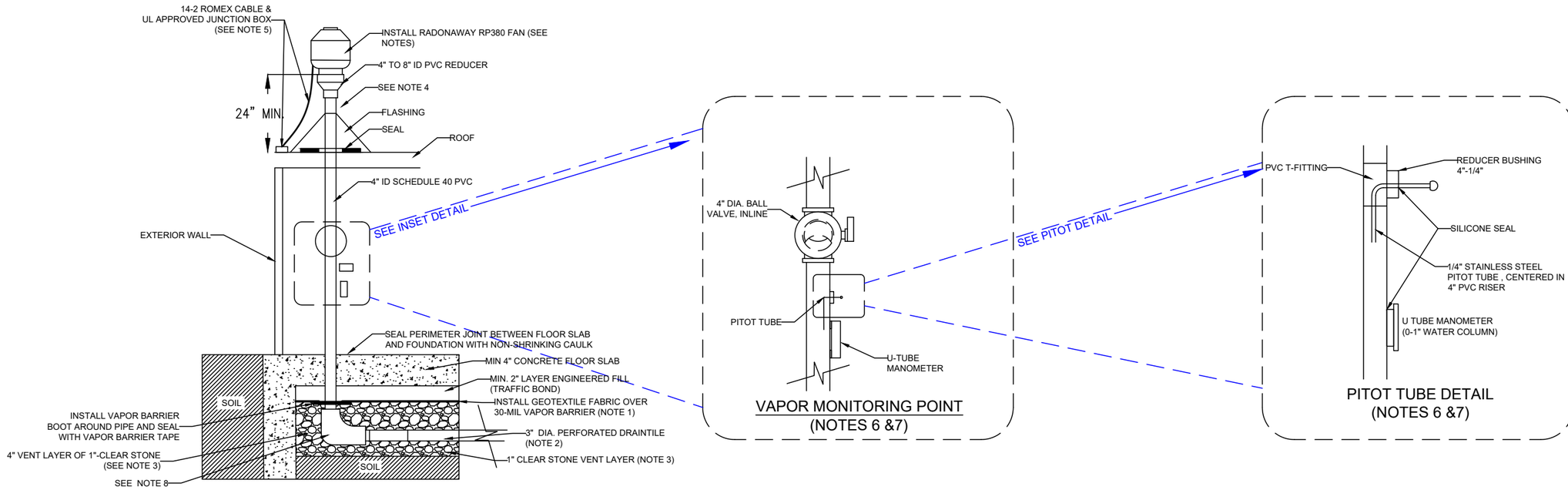

ROOF VENT PIPE AND SLAB PENETRATION DETAIL

VAPOR MONITORING POINT (NOTES 6 &7)

PITOT TUBE DETAIL (NOTES 6 &7)

VACUUM POINT DETAIL

DRAINTILE DETAIL (NOTE 2)

SUB-SLAB PERFORATED VENT PIPE

VAPOR BARRIER SEAM

NOTES:

1. FOLLOW MANUFACTURER DIRECTIONS TO INSTALL 30-MIL WELDED-SEAM HDPE VAPOR BARRIER. INSTALL 6 OZ. NON-WOVEN GEOTEXTILE FABRIC ABOVE VAPOR BARRIER TO PROVIDE PROTECTION FOR BARRIER. ALL NEW CONCRETE FLOOR PENETRATIONS SHOULD HAVE A VAPOR BARRIER BOOT AROUND PIPE AND SEAL WITH VAPOR BARRIER TAPE.

2. INSTALL 3" DIAMETER CORRUGATED DRAIN TILE AS SHOWN ON DETAIL. FOR PIPE PERFORATION MAINTAIN UNIFORM PIPE ELEVATION FOR EACH SEPARATE PIPING RUN.

3. METHANE VENT LAYER SHALL BE 1-INCH CLEAR STONE.

4. LOCATE EXTERIOR GAS VENTS MIN 10' FROM AIR INTAKES OR OTHER OPENINGS SUCH AS WINDOWS AND DOORS.

5. INSTALL RADONAWAY RP380 FAN (8" DIAMETER). LICENSED ELECTRICIAN REQUIRED FOR INSTALLATION. EACH FAN SHOULD HAVE ITS OWN CIRCUIT BREAKER. FOR POWER FEED, USE 14-2 ROMEX CABLE TO SINGLE GANG UL LISTED JUNCTION BOX AT ROOF LEVEL. ONE FAN PER 2,500 SQUARE FOOT OF FIRST FLOOR SPACE. NEW BUILDING WILL HAVE 2 FANS.

6. INTERIOR VENT PIPE SECTIONS SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR LEVEL. LABEL SHALL READ "SUB-SLAB VENT SYSTEM".

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8. INSTALL A U-TUBE MANOMETER TYPE PRESSURE GAUGE ON VERTICAL VENT PIPE RUN, INSIDE INTERIOR WALLS, INLINE WITH BALL VALVE AND COMPRESSION FITTING, WITHIN WALL RECEPTACLE BOX WITH REMOVABLE COVER.

9. USE 90 DEGREE PVC ELBOW TO CONNECT 4" SCH 40 PVC TO PVC CORRUGATED DRAIN TILE.

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APPROVED BY	KWW	DATE	6/29/17

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FIGURE 10
NEW BULDING ACTIVE VAPOR MITIGATION SYSTEM DESIGN
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET & 139 EAST OREGON STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019
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SHEET NUMBER

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Attachment I

KEY ENGINEERING GROUP LTD.
A Division of SET Environmental Inc.
735 North Water Street, Suite 510
Milwaukee, Wisconsin 53202
Phone (414) 224-8300
Fax (414) 224-8383

April 11, 2017

Ms. Nancy D. Ryan
Hydrogeologist
Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
2300 North Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-3128

Reference: *Supplemental Site Investigation/Remedial Action Plan Review March 27, 2017 Email*
Former Wayne Pigment Corp.
300 South Barclay and 139 East Oregon Street
Milwaukee, Wisconsin
FID No. 241029470
BRRTS No. 02-41-553395 and 03-41-547627

KEY ENGINEERING GROUP, LTD.
Proposal No. 1604-1210-0002

Dear Ms. Ryan:

Key Engineering Group, Ltd. (KEY) submitted a *Site Investigation Report & Revised Remedial Action Plan* (Supplemental SIR/Revised RAP) to the Wisconsin Department of Natural Resources (WDNR) for review for the above referenced site on January 31, 2017. Based on a review of the Supplemental SIR/RAP, the WDNR prepared a list of comments and requests for additional information. Below is a summary of the comments and requests for additional information from the WDNR (italicized below), followed by a prepared response on behalf of PPG GP LLC (PPG). This response is being submitted prior to a technical meeting scheduled for April 12, 2017.

1. *Confirm that the RP will obtain an exemption from solid waste rules (NR 506.05 Wis. Adm. Code) before construction begins to allow building on an historic fill site.*
   A Development at Historic Fill Site or Licensed Landfill Exemption Application (WDNR Form 4400-226) is currently being prepared and will be submitted for the site redevelopment. The site redevelopment will include two building additions including one south of Building 11, and a connector to link Buildings 33 and 34, replacement of the asphalt surface west of Building 33, removal of the horizontal component to the elevated rail line located south of Building 33, removal of the concrete containment structure south of Building 11, clearing, grubbing, and replacement of landscaped areas, abandonment of underground utilities, and installation of new and replacement utilities.

2. *TCE contamination area: We understand that the pre-excavation soil sampling in the TCE area has already been conducted. Please provide the results and discuss whether the extent and degree of contamination under building 34 has been sufficiently defined. Do the results change the limits of the proposed excavation? Provide details on the interior features of the building that might indicate potential source areas and that may present impediments to further investigation.*
The pre-excavation delineation sampling plan proposed in the Supplemental SIR/Revised RAP was completed in February 2017 (Figure 1). The current analytical dataset for this area of concern currently includes a total of 137 VOC, 48 TCLP VOC, nine lead, and 14 TCLP lead results.

Now that a more complete dataset is available, the data is being evaluated and will be submitted to the WDNR for review and approval with a hazardous waste determination request. If warranted based on the new data, this submittal may present a revised remedial action goal based a where characteristically hazardous soil is present, percent mass that may be removed, and what soil is accessible without comprising the integrity of the buildings during excavation and backfilling. Revised excavation limits will be presented in the submittal along with the location of what soil will be managed as hazardous waste and nonhazardous waste.

Building 34 Interior Features
The investigation completed under Building 34 include the advancement of 16 soil borings (SB-48 through SB-52 and V-20 through V-30 and three temporary wells (TW-50 through TW-52). Borings SB-48, SB-49, and V20 through V-30 were advanced south of the north building wall based on elevated VOC concentrations from elevated VOC concentrations detected in borings SB-65 and MW-2. Today, we also know that Hydrite Chemical Company stored waste solvent in this area. Boring SB-51 was advanced in an area where a former AST was located and a closed sump (no inlets or outlets). Borings SB-50 and SB-52 were advanced in two separate stalls. Boring V-26 is also located adjacent to a sump.

We understand through verbal communications with the WDNR that additional investigation may be recommended under Building 34. The building is approximately 95 feet by 50 feet or 4,750 square feet. There were originally 5 borings located within the footprint of the building to evaluate soil and groundwater impacts under the building. Additional borings and analytical results may identify other areas of impact, however the soil under the entire footprint of the building cannot be excavated safely. The soils in the Third Ward of Milwaukee are extremely soft. Buildings are constructed over structural supports. Removal of the Building 34 floor to access impacted soil removes the structural integrity of the building and poses risk to building failure and site workers. An active vapor mitigation system will be installed over the existing concrete floor to mitigate the risk of vapor intrusion from any remaining impacted soil and groundwater underlying the building.

3. *The rationale for selecting 8.8 ppm TCE as a clean-up goal should be further discussed.*

The Supplemental SIR/Revised RAP presented remedial action objectives for an area with elevated chlorinated VOCs located between Buildings 33 and 34 and under Building 34. The remedial action objectives were designed to address the highly-impacted soils and location of direct contact exceedances, reduce the elevated groundwater concentrations, and eliminate the risk of vapor intrusion into the buildings.

A remedial action goal of 8.8 milligrams per kilogram (mg/kg) for this area was selected as it's a published number by the WDNR as a health based concentration for trichloroethene (TCE) in soil using the U.S. Environmental Protection Agency web based calculators. This health based TCE concentration was also determined to be a protective of groundwater. Therefore, this remedial goal was recommended to remove a sufficient volume of soil above and below the water table that would be protective of human

health, reduce the groundwater concentrations, and remove a sufficient contaminant mass to reduce the risk of vapor intrusion into the buildings.

4. *Haz waste determination: Provide further discussion on soil management for the proposed TCE remedial excavation. Specifically, a haz waste determination with details on how soil proposed for excavation has been characterized and how areas determined to be hazardous will be segregated from non-haz.*

   A hazardous waste determination is being prepared and will be submitted to the WDNR for review and approval for the TCE area based on the historical and recent analytical data collected.

   The pre-excavation delineation sampling plan proposed in the Revised RAP was completed in February 2017. A total of 84 soil samples were laboratory analyzed for VOCs and eight soil samples were laboratory analyzed for lead. Where individual VOCs exceeded their respective 20x limit for acceptance into a Subtitle D landfill, toxicity characteristic leaching procedure (TCLP) VOCs were laboratory analyzed to determine if the soil was characteristically hazardous. A total of 33 soil samples were laboratory analyzed for TCLP VOCs. Additionally, TCLP lead was laboratory analyzed on each of the eight total lead samples.

   Hazardous soil will be excavated/remediated prior to loading the nonhazardous trucks to avoid commingled of the wastes and avoid the risk of hauling soil to an inappropriate landfill.

5. *Provide more information on TCLP sampling methods and results. It does not appear that TCLP testing was conducted at locations within the area proposed for ZVI treatment where metals concentrations are extremely high and it appears that some of this area is proposed to be landscaped that would involve excavation of some of this soil.*

   Soil samples will be collected for VOCs, RCRA metals, hexavalent chromium, trivalent chromium, and TCLP VOCs and metals from the borings for the performance monitoring wells proposed planned in the area where ZVI treatment is planned. This data will be used to prepare a hazardous waste determination and used to determine the appropriate disposal location for the soil cuttings generated from the well installation and the excavation proposed in the area for the building addition and/or landscaping activities.

   Soil samples were collected for TCLP analysis from soil borings where total VOCs and/or metals were greater than the 20x the Subtitle D landfill acceptance limits. TCLP analyses were also completed for waste profiling, where total VOCs and metals were not analyzed, and to evaluate the leachable TCE in the area between Buildings 33 and 34 and the area of leachable metals south of Building 11. The total VOC and TCLP data will be presented in the hazardous waste determination with further explanation.

6. *We will require investigation of soil/groundwater in the location of SB-41 where the composite sample (from ? depths) was found to be characteristically hazardous based on ignitability.*

   Boring SB-41 was advanced to collect a sample for waste profiling when a soil excavation was being considered. The composite sample was collected from 2 to 6 feet. An updated waste characterization table is presented as Table 1. Based on a review of soil and groundwater VOC analytical from the surrounding borings and monitoring wells, and ignitability data from SB-90 reported greater than 210 degrees Fahrenheit (F), the ignitability result from boring SB-41 detected at 124.15 F is limited in areal extent. Investigation of this area seems unwarranted when there are already three borings and one monitoring well located within 20 feet of boring SB-41.

7. *We also need additional investigation of soil and groundwater to better define the extent of contamination in the area between Building 11 and the former tank farm – shown as elevated dock area on the site maps. Propose additional investigation in this area.*

Investigation activities were not completed in this area historically due to the presence of the dock. The dock measures approximately 25 feet by 20 feet or an area measuring 500 feet. Additional investigation will be completed under the dock when it is removed to complete a hazardous waste determination for the soil that will be removed for the proposed building 11 addition and installation of the sub-slab vapor mitigation system.

8. *A haz waste determination should be made for any area of the site proposed to be disturbed for remedial excavations, excavation for construction of the remedial cap, utility construction, foundations, etc.*

Hazardous waste determinations will be made for areas where soil will be disturbed for remedial excavations, excavation for construction of a remedial cap (landscaped areas), utility construction, and foundations. However, soil disturbed where new utilities will be installed in the right-of-way will be not be sampled for laboratory analysis prior to utility installation. Pre-sampling cannot be conducted safely due to the presence of multiple utilities in the right-of-way. However, based on the soil analytical results from inside and adjacent to the buildings, a hazardous waste determination can be made without additional sampling in the right-of-way. Contractors will either install utilities using directional drilling or excavation. Where non-hazardous excavations are conducted for utility installation, the soil may be placed back in the excavation. Excess non-hazardous soil stockpiled onsite on plastic and covered with plastic pending disposal. Excess hazardous soil will be collected onsite in water tight rolloffs.

9. *Groundwater: Provide a more thorough discussion of groundwater contamination results including assessment of trends, where contaminants are migrating off-site and if and where remediation is needed. You identify need for remediation of TCE and metals. No discussion of PVOCs or PAHs is provided.*

Petroleum VOCs

Groundwater PVOC data was discussed in Section 5.2.1 of the Supplement SIR/Revised RAP.

One or more petroleum VOCs including benzene, ethylbenzene, naphthalene, toluene, total trimethylbenzenes, and total xylenes exceeded their respective ESs at the Site. Groundwater benzene, ethylbenzene, naphthalene, and total xylenes isoconcentration maps using the monitoring well analytical results December 21, 2015 and temporary well analytical results from 2006 through 2016 are presented as Figures 31 through 34, respectively in the Supplemental SIR/Revised RAP. The isoconcentration maps and text of report identified where the highest concentrations were located and estimated extent of impacts onsite and offsite. Below is a summary of petroleum VOC trends for analytes exceeding their respective ESs.

Monitoring Well MW-4:

A trend line graph for benzene in monitoring well MW-4 is presented as Figure 3. Benzene concentrations continue to decrease over time. Total trimethylbenzenes and total xylene concentrations exceeded their respective ESs in December 2015 for the first time. These concentrations will be monitored long term to evaluate trends.

Monitoring Well MW-5:
Benzene exceeded the ES of 5 ug/l in December 2015 at 6.8 ug/L. This concentration is only slightly above the ES and has only been reported twice of the ES out of nine sampling events.

Monitoring Well MW-6:
Trend line graphs for benzene, ethylbenzene, total trimethylbenzenes, and total xylenes in monitoring well MW-6 are presented as Figures 4 through 6. These PVOC concentrations continue to decrease over time.

Monitoring Well MW-8:
Trend line graphs for benzene, naphthalene, total trimethylbenzenes, and total xylenes in monitoring well MW-8 are presented as Figures 7 and 8. These PVOC concentrations continue to decrease over time, except for naphthalene. However, the early concentrations and the December 2015 sample concentrations are similar.

Petroleum VOCs were exceeded south of Building 11. Remediation of petroleum VOCs south of Building 11 was not proposed near monitoring wells MW-4 through MW-6 and MW-8 since the impacts were predominantly located under the asphalt paved area and concentrations are generally decreasing. Further, there are no ES exceedances in offsite wells located in the alley east of the site in monitoring wells MW-11, MW-12, MW-13, or MW-14R for petroleum VOCs.

Chlorinated VOCs
Groundwater chlorinated VOC data was discussed in Section 5.2.1 of the Supplement SIR/Revised RAP.

Chlorinated constituents including TCE, 1,1,1-TCA, 1,1-dichloroethene (1,1-DCE), methylene chloride, and vinyl chloride exceeded their respective ESs at the site. Acetone is not a chlorinated compound, but is used as a solvent, like TCE. Groundwater analytical results are summarized in Table 2. Groundwater TCE and methylene chloride isoconcentration maps using the December 21, 2015 monitoring well analytical results and temporary well analytical results from 2006 through 2016 are presented as Figures 35 and 36, respectively. Below is a summary of chlorinated VOC trends for analytes exceeding their respective ESs.

Monitoring Well MW-1:
A trend line graph for TCE in monitoring well MW-1 is presented as Figure 9. The chlorinated VOC concentrations continue to decrease over time.

Monitoring Well MW-2:
A trend line graph for TCE, 1,1-DCE, cis-1,2-dichloroethene, and vinyl chloride in monitoring well MW-2 is presented as Figure 10. The chlorinated VOC concentrations continue to decrease over time.

Monitoring Well MW-19 and Piezometer PZ-1:
TCE was exceeded the ES in monitoring well MW-19 and piezometer PZ-1 in December 2015 and November 2016. These wells have only been sampled once or twice. These wells will be sampled as part of the long-term groundwater monitoring plan to evaluate trends.

Polycyclic Aromatic Hydrocarbons
Groundwater PAH data was discussed in Section 5.2.3 of the Supplement SIR/Revised RAP.

One or more PAHs exceeded their respective ESs at monitoring wells MW-6 through MW-8 and MW-10 for benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and naphthalene. The source of the benzo(a)pyrene, benzo(b)fluoranthene, chrysene are likely related to the fill material onsite. The source of naphthalene is likely related to releases from the historical naphtha USTs that were located near MW-8. PAH concentrations ranged from 0.22 µg/l to 1.9 µg/l for benzo(a)pyrene, benzo(b)fluoranthene, chrysene, compared to an ES of 0.2 µg/L. Naphthalene exceeded the ES of 100 µg/l at 169 µg/L at MW-8. These concentrations are not significant and do not warrant active remediation.

10. *Offsite investigations: We understand environmental investigations have recently been conducted at the properties to the west and east of the site and that information may be available to use to better define the extent and degree of potential off-site contamination. Based on the figure, Proposed Off-site Monitoring Well Locations, DNR potentially would like to see additional wells installed at the following locations: northwest of B-2/TW-2, west of TW-4, southwest of TW-3, east of MW-12, off-site south of SB-91. This is in addition to proposed wells: east of TW-10, southeast of MW-15, south of MW-14R and west of MW-19. We understand that some of this investigation may be conducted by the adjacent property owners, we should discuss the suggested new locations, justification for needing or not needing them, features of the site that make it difficult to complete the investigation, and/or responsibility of off-site parties for installing wells, etc. Please indicate if you plan to collect soil samples during construction of off-site monitoring wells. (If such wells are installed by Key).*

The current monitoring well network currently includes 20 wells including 19 monitoring wells (MW-1 through MW-13, MW-14R, and MW-15 through MW-19) and one piezometer (PZ-1). Four additional offsite monitoring wells were proposed in the Supplemental SIR/Revised RAP to complete the offsite investigation. The WDNR has indicated that up to five additional offsite monitoring wells may be warranted. Below is a response to each additional well proposed by the WDNR:

- Northwest of B-2/TW-2 – Groundwater TCE exceeded the ES of 5 µg/L at 36 µg/L in March 2006. A well was not proposed in this area since installation of an upgradient well to delineate TCE where a groundwater sample from a temporary well was likely biased high due to turbidity seemed unwarranted.

- West of TW-4 - Groundwater TCE exceeded the ES of 5 µg/L at 17 µg/L in March 2006. A well was not proposed in this area since installation of an upgradient well only 20 feet to the west to delineate TCE where a groundwater sample from a temporary well was likely biased high due to turbidity and only slightly over the ES seemed unwarranted.

- Southwest of TW-3 - Groundwater TCE exceeded the ES of 5 µg/L at 5.6 µg/L in March 2006. A well was not proposed in this area since installation of an upgradient well to the west to delineate TCE where a groundwater sample from a temporary well was likely biased high due to turbidity and only slightly over the ES seemed unwarranted.

- East of MW-12 – Monitoring well MW-12 is only located approximately 17 feet from Building 11. There is a high-pressure water line that runs along east wall of Building 11 (Figure 1). A well cannot be safely installed any closer to the building in this area. Additionally, installing another well this close to an existing well seems unwarranted.

- Offsite south of SB-91 – One of the proposed offsite wells is located south of SB-91 and east of the railroad tracks. This proposed well location can be moved to west of the railroad tracks, but it seems redundant to install two monitoring wells south of SB-91 and north of Florida Street so close to each other.

KEY requests continued support from the WDNR to assist with offsite owners sharing data that may be used to complete the Site investigation. These locations may be reviewed further once the offsite data from other parties are received.

Soil samples will be collected from the borings advanced to install the proposed offsite monitoring wells.

11. *Utilities: We have previously requested this and would like additional information about underground utilities below building 11, sanitary connections and construction of sumps, where they discharge and whether they are currently discharging to the sewer. Also provide specific information (including maps) regarding the location and construction of new utility lines and how current lines will be abandoned. Also provide details on construction of new utilities, i.e., will utility collars will be constructed to prevent contaminant migration? Discuss the status of/future disposition of sumps in building 11.*

Building 11 Current Utilities

Building 11 utilities were discussed in Section 2.2.1 of the Supplemental SIR/Revised RAP. Building 11 is serviced by municipal sewer and water, as well as natural gas and electric. A site layout map with utilities is presented as Figure 1. The location of sumps is presented on Figure 2.

- Sanitary water was discharged through a lateral to a combined sewer and storm water line that exits the Building 11 at the northeast corner and connects to the main line under Oregon Street.
- The water lateral is under Barclay Street and enters Building 11 at the southwest corner.
- The gas line is located under Oregon Street and enters Building 11 near the northeast corner.
- The electric service to the building is overhead.
- There are eight sumps (S-1 through S-8) located in the basement of Building 11. Sumps S-1 through S-6 are used to drain foundation water since the basement is located below the water table. The locations of the sumps are presented on Figure 2. Sumps S-7 an S-8 do not have inlets or outlets. These sumps were likely used for process water and not draining the foundation. When the building was vacated, the pumps in the sumps were removed. Currently some water is standing within the sumps but is not being pumped out.

  The sumps are constructed of poured concrete walls and bases. The sumps measure between 2 to 6.4 feet wide and are 3 to 4 feet deep, except for Sump 1 which was 10 feet deep. Laterals are present in sumps S-1 through S-6 between 1 to 4 feet below the basement floor. When the building was occupied, sump water was pumped from the sumps through aboveground pipes to the wastewater treatment system located on the third floor of the building.

  There was formerly a wastewater treatment system located on the third floor of the building. Historically, all wastewater from processes, sump water, and water that collected in the concrete AST containment areas located south of Building 11 were pumped to this system. Treated wastewater was then discharged into a settling basin located in the basement. Wastewater in the settling basin was discharged through an outlet on the west wall of the settling basin to an exterior lateral located at the northwest corner of the building that connected to a combined sanitary sewer and stormwater system main line located under Oregon Street. The Milwaukee Metropolitan Sewerage District (MMSD) approved a wastewater discharge permit for the facility. Samples were collected in accordance with the permit by MMSD staff.

The pumps in the sumps, as well as the wastewater treatment plant, were removed when WPC Technologies vacated the building. The sumps collect roof drain water (observed during a rain event) from the building foundation. No water from the sumps is currently being discharged offsite through the combined sanitary and storm lines. Since the pumps are no longer present, the sumps are full of water. There is no water in the settling basin as there are no pipes entering the basin.

- There are lines located under the basement floor that appear connected to sumps S-1 through S-6. The location of the inlet to the lines is presented on Figure 2. This deduction was made based on the water level in the sumps in March 2017. The water level in sumps S-1 through S-6 was near the top of the sumps and water likely backed up to the top of the inlets that are flush with the floor. The pipe inlets are open pipes without plates or grates in them and appear to be cut off flush with the floor. These lines were likely used prior to the installation of the wastewater plant when water was discharged from the sumps to the combined stormwater sewer line located under the east sidewalk along Barclay Street. When the wastewater treatment plant was installed, sumps were reported replaced and the outlets to the combined stormwater sewer line under the sidewalk were capped. The inlet portions of the conveyance lines that are flush with the basement floor are depicted on Figure 2.

Building 11 Utility Abandonment

Current utilities will be capped in accordance with City of Milwaukee code requirements, which requires utilities are capped with concrete on the back of the curb line.

Building 11 sumps were pumped out and pressured washed on March 22, 2017. The sump water was transported in totes to Badger Disposal as a hazardous waste. As part of renovation activities, the sumps will be pumped dry and permanently abandoned with a concrete slurry or flowable fill.

Building 11 Future Utilities

The location and construction of new utilities is included on the attached architectural drawings. The depths of the utilities are determined based on the depth to mainlines on Oregon and Barclay Streets. WE Energies determines the methodology for the installation of electric and gas lines. This could include soil excavation or direction drilling. Water and sewer lines require the excavation of soil. Clay plugs or anti-seep collars will be installed in the utility trenches where the line enters and exits the fill material or impact media, as well as where the line enters the structure, to prevent the trench from becoming a conduit for the migration of gas or impacted groundwater. The clay plug will be at least four feet long.

12. *Remedial Capping Plan: Provide more details regarding construction of the proposed landscaped areas including a description of the types of plants (root ball size) that will be used, and the depth required to accommodate the plantings. Areas requiring excavation that would produce potentially hazardous waste upon excavation should be identified prior to excavation. If applicable, haz waste management rules must be followed.*

The location of proposed landscaped area is depicted on the attached architect drawings. The landscape plan has not been fully developed at this time. The current landscape plan is based on minimum green space requirements from the City of Milwaukee. A landscape architect will be retained after architect drawings are approved by the City of Milwaukee to prepare a final landscape plan.

Areas that will be landscaped will have a clean soil layer that will serve as a barrier cap as discussed further under the response to Item #13. The depth of the clean soil layer will be determined and approved by the WDNR prior to implementation. A hazardous waste determination will be prepared for all areas where soil will be excavated for installation of landscaping.

13. *Provide discussion to support the proposed 1.5' thick soil cap. i.e. why it will be protective, can be maintained, etc. We will need details on where exactly the soil cap will be placed, the slope of any non-flat areas, etc. DNR may consider approving a cap of this thickness on the Oregon St. property based on your justification, however, may be more supportable if you add a warning layer. Based on the high concentrations of metals and PVOCs south of building 11, we will require something more protective for landscaped areas on the Barclay parcel. We expect that a capping plan for landscaped areas would ensure that contaminated soil will not be disturbed/encountered in the future. A thicker clean cap with possibly warning layer should be considered and a revised plan proposed.*

Oregon Street Property

A 1.5-foot soil cap is proposed on the Oregon Street property for areas that will be landscaped. The proposed final topography and location of proposed landscaping are presented on the attached architect drawings. A warning layer consisting of orange or other bright color snow fence, or similar permeable material, will be installed between the impacted soil and overlying clean soil cap. Based on the landscape plan that will be developed, the soil cap will be extended to 3 feet deep and a minimum of 4 feet by 4 feet horizontally where a tree or root ball is greater than 1.5 feet is proposed to eliminate the concern of encountering impacted soil during planting.

Barclay Street Property

A 2-foot soil cap is proposed on the Barclay Street property for areas that will be landscaped. The proposed final topography and location of proposed landscaping are presented on the attached architect drawings. A warning layer consisting of orange or other bright color snow fence, or similar permeable material, will be installed between the impacted soil and overlying clean soil cap. Based on the landscape plan that will be developed, the soil cap will be extended to 3 feet deep and a minimum of 4 feet by 4 feet horizontally where a tree or root ball is greater than 2 feet is proposed to eliminate the concern of encountering impacted soil during planting.

14. *Soil gas samples: Provide further information on the depth and sampling methods used for the soil gas samples collected around building 11. Were leak tests conducted? If the samples were collected at 5 feet or less, these would be not be considered deep soil gas and the appropriate vapor risk screening level would be the sub-slab level. Please describe sampling methods.*

Seven near-slab shallow soil gas points (SG-1 through SG-7) were installed and sampled along the north, east, and south sides of Building 11 on December 24, 2015. The locations of the shallow soil gas points are presented on Figure 2. Shallow soil gas points were installed to collect vapor samples, oppose to installing sub-slab vapor points, since the water table intersects the basement of Building 11. The basement in Building 11 is approximately 8.5 feet below grade. The water table around Building 11 is as shallow as 5.5 feet below ground surface (bgs).

The shallow soil gas points were installed using direct push technology to 5 feet bgs and constructed with solid Schedule 40 PVC pipe open at the bottom. The depth of 5 feet was selected to collect vapors from directly above the water table. The annular space was filled with coarse sand to approximately 2 feet bgs and topped with approximately 2 feet of hydrated bentonite.

The seals were tested using standard shut-in testing procedures to verify the seals were adequate. A PVC fitting with a stop valve was attached to the top of the shallow soil gas point. Silicon tubing was attached to the PVC fitting and run through the top of a shroud. The shroud was placed over the shallow soil gas point and sealed to the ground surface with hydrated bentonite. A second silicon tubing that penetrating the sidewall of the shroud was used to pump helium into the sealed shroud. A helium detector was used to measure for the presence of helium existing the shallow soil gas point from the tubing connected to the soil gas point. Once an adequate seal was confirmed (no helium detected), the shroud was removed and the silicon tubing from the top of the soil gas point was attached to a laboratory provided Summa canister and vapor was extracted for approximately 30 minutes. The vapor samples were submitted to a laboratory for VOC analysis using EPA Method TO-15. After the samples were collected, the soil gas point PVC was removed and the borehole was abandoned with granular bentonite.

The shallow soil gas analytical results were compared to the target sub-slab vapor risk screening levels (VRSLs). The soil gas analytical results are summarized in Table 3. Benzene exceeded the VRSL of 120 micrograms per cubic meter ($\mu g/cm^3$) at SG-1 (169 $\mu g/cm^3$) located at the northwest corner of Building 11 and tetrachloroethene exceeded the VRSL of 1,400 $\mu g/cm^3$ at SG-4 (9,400 $\mu g/cm^3$) along the east central wall of Building 11.

15. *Vapor Intrusion: Sub-slab vapor depressurization system (SSDS): In addition to the proposed active SSDS under building 34, based on the sub-slab results from Building 33 where two of the four locations exceeded vapor risk screening levels, we will require an active system under building 33 and the proposed addition between building 33 and 34.*

    Active sub-slab vapor mitigation system will be installed under Buildings 33, 34, and the connector building planned between Buildings 33 and 34. Also, as discussed in the response to Item #16, an active system will be installed for Building 11 and the addition planned south of Building 11.

16. *Discussion with Alyssa Sellwood. She suggested the following regarding the active system design: She suggested that the systems in Buildings 33 and 34 be designed with clean air intakes. This would be good for Building 11 too, if possible. (See attached figure) To allow verification of system effectiveness, consider installing ports during construction that extend to below the new floor to allow testing for pressure differential. Also consider installing a port or ports extended below the original floor for future testing for TCE to determine if the system can be turned off. Provide further details on construction design and how you will verify SSDS is operating as designed for the active system(s). Indoor air sampling will be required.*

    KEY discussed the proposed sub slab design in greater detail with Ms. Sellwood of the WDNR. Ms. Sellwood was in agreement with KEY that in order for the proposed design to be effective, the interstitial granular space must exert a negative pressure. To install clean air intakes will negate negative pressure, effectively disabling the system from pulling a vacuum. Ms. Sellwood stated that KEY will have to prove the system is working, we informed Ms. Sellwood that we will be installing a sampling tube that will extend from the occupied space to the interstitial space, and a second tube extending from the occupied space to below the original floor slab. The sampling tubes will have a dual purpose:

    1. The first purpose being to measure differential pressure between the occupied space and the interstitial (to prove depressurization) and the original floor sub slab, provided that zone is not saturated.
    2. The second purpose will be to sample soil gas within the interstitial sub slab space and beneath the original floor slab (provided that zone is not saturated).

In addition, KEY discussed with Ms. Sellwood that we will be installing a sealed sump pump within the interstitial gravel space. The sump pump would remove any water that might accumulate within the interstitial space. The sump will also be sealed air tight to ensure the negative pressure can be maintained.

17. *For Building 11, we will need more soil and groundwater investigation in the area where the addition is planned (mentioned above). This information should be used to determine whether the vapor mitigation system in this area should be active. Also, because contaminated groundwater is in contact with the building, you cannot rule out vapor intrusion as a pathway of concern and will need to conduct a performance evaluation to verify the effectiveness of the passive system – either by verifying a constant negative pressure, and/or verify that the air trapped below the new floor is sufficiently oxygenated and not contaminated above VRSLs. Potential movement of air from outside the building near SG-4 should be evaluated and basement walls inspected/sealed to limit that possibility. Collection of Indoor air sample(s) will also be required. Please provide additional details on how the system will be constructed, including cross section, and describe how verification testing accomplished.*

    We will be installing an active venting system in all buildings.

    We will be collecting air samples when the system is up and running. Sampling will include sub-slab sampling, indoor air sampling, and background sampling in each building.

    Revised active vapor mitigation systems are currently being prepared for review by Ms. Sellwood and Ms. Ryan.

18. *Metals remediation: Provide additional information to support the proposed remedial ZVI treatment of chromium and arsenic contaminated groundwater. Effectiveness of treatment should be described based on experience gained at other sites with similar site characteristics and conditions, scholarly papers, and/or case studies, etc.*

    Successful treatment of groundwater requires knowledge of the source, geochemical parameters in the affected area, knowledge of subsurface geologic and hydrogeologic conditions, experience with in-situ technology. The source of the elevated arsenic and chromium in the groundwater was described in the Revised RAP as follows:

    - PPG had three underground storage tanks (USTs) and two ASTs in this same area that contained arsenic acid.
    - Wayne Pigment used the AST containment area for storage of sulfuric acid, nitric acid, and sodium hydroxide.
    - Acidic conditions in the groundwater can cause the dissolution of metals, like arsenic and chromium, into the groundwater. The pH of the groundwater in the monitoring wells located south of Building 11 in November 2016 ranged from approximately 5.5 to 6.0. The groundwater in Milwaukee is typically neutral. These lower than average pH values are an indicator that more acidic conditions were likely present at one time.

Based on the use of arsenic acid in the area, understanding that acidic conditions can cause metals to dissolve more readily than in neutral conditions, and elevated arsenic and chromium concentrations in the soil and groundwater in the area, the elevated concentrations are likely due to leaking or overfilling of the PPG USTs and ASTs and/or poor housekeeping.

KEY personnel have experience in injecting over 750,000 gallons of various solutions for groundwater treatment in Wisconsin including molasses, cheese whey, emulsified oil, and potassium permanganate. This experience has translated into practical knowledge for successful design and implementation of in-situ groundwater treatment. This practical experience has provided KEY with the ability to understand site-specific geologic and hydrogeologic conditions as related to in-situ treatment, determine which injection method (injection wells, trench, point injections) and delivery option (pressurized flow/rate, gravity flow) is most appropriate, and determine appropriate injection volumes to treat the affected area and limit "pushing" or migration of impacts.

The application of zero valent iron (ZVI) is a proven effective means of *in situ* remediation to manage elevated dissolved phase metals, like arsenic and chromium, in groundwater. This was confirmed through online research, review of technical articles and publications, and technical discussions with multiple ZVI providers.

Nano-scale iron is preferred for its higher reduction rate than larger diameter iron products due to its increased surface area that is made available to react with the dissolved metals in groundwater. The chemical process occurs through the oxidization of elemental iron to ferrous iron and ultimately to ferric iron (i.e., Fe0 to Fe2+ and Fe2+ to Fe3+). As this process occurs, hydrogen (H+) is produced which creates highly reducing redox conditions in the aquifer. This produces the optimal conditions for the reduction of the dissolved metals. ZVI has been proven to reduce or precipitate chromium and adsorb arsenic in groundwater. ZVI was also selected since the product is also safe for injections near underground utility lines and provides long term irreversible treatment.

Sorption of hexavalent chromium (Cr(VI)) to soil particles is low due to the species having a negative charge. Sorption further decreases as the pH values increase. Chromate in the presence of zero valent iron as a source of ferrous iron reacts as follows:

$$Fe^0 + CrO4^{2-} + 4H2O = Fe(OH)_3 + Cr(OH)_3 + 2OH^-$$

This reaction demonstrates the highly reducing condition that occurs in the subsurface which produces the less toxic and insoluble trivalent chromium (CR(III)). Once reduced, Cr(III) is significantly more stable than Cr(VI) as it forms complexes with ferrous iron and has precipitates out of solution. The precipitate will ultimately "clog" the mobile pore space, which is an added benefit to the treatment as the mobility of water through and from the treated area is reduced. The reversal of the chromium oxidative state from trivalent to hexavalent can only occur if the groundwater pH were to naturally increase. However, based on experience with injecting carbon amendments, like molasses, the short-term increase in pH is only as the buffering capacity in the soil in southeast Wisconsin is high due to our highly alkaline soils.

Arsenate (As(V)) and arsenite (As(III)) in groundwater can be treated using ZVI. Research has shown that the removal mechanism for arsenic involved adsorption and/or precipitation on the iron surface. Further, the removal efficiency improves with time as corrosion of the zero valent iron occurs and creates additional area for adsorption. Additional processes like coprecipitation and reduction-oxidation transformation.

Consultation with ZVI providers included a review of the site conditions, soil and groundwater concentrations, and recommendations on adequate dilution and volume estimates to stabilize the chromium and arsenic.

References

Favara, Paul, and others. In Situ Cr(VI) Source Reduction with ZVI Under An Active Building. 2004

US Environmental Protection Agency. Field Application of a Permeable Reactive Barrier for Treatment of Arsenic in Ground Water EPA 600/R-08/093. September 2008.

City Chlor. In Situ Chemical Reduction using Zero valent Iron injection. April 2013.

Interstate Technology Regulatory Council. Permeable Reactive Barrier: Technology Update. June 2011.

Sublime Engineering. Final Design Report: Water Filter for Uranium, Arsenic, and Bacteria Removal. May 2014.

Closing Remarks

We appreciate the WDNR sharing your thoughts prior to our meeting, and we look forward to discussing each of these items in greater detail soon.

Please feel free to call if you have any questions.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Toni Schoen
Senior Project Manager

D'Arcy J. Gravelle, PG
Senior Hydrogeologist

Kenneth W. Wein, CHMM
Principal

Attachments: Tables 1 through 3
Figures 1 through 10
Architectural Drawings

Tables

Table 1. Soil Waste Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon Street, Milwaukee, Wisconsin

Parameter	Landfill Acceptance Limit	WC-1	SB-90	SB-91	WC-2	WC-3	WC-4	WC-5	WC-6	SB-63	SB-64	SB-65	SB-66	SB-67	SB-68	SB-69	SB-70	SB-71	SB-72	SB-73	SB-74
Sample Date		3/7/2016	9/20/2016	9/20/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	9/6/2016	9/20/2016	9/6/2016	9/6/2016	9/6/2016	9/6/2016	9/6/2016	9/6/2016	9/6/2016	9/6/2016	9/20/2016	9/20/2016
Media		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Building		Building 11	Building 11	Building 11	Building 33	Building 33	Building 33	Building 33	Building 33	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34	Building 34
Sample Location(s)		SB41 2-6'	SB-90 2-4'	SB-91 2-4'	SB37 2-4'	SB38 2-4'	SB39 2-4'	SB40 2-4'	SB37-SB40	SB-63 2-6'	SB-64 14-18'	SB-65 8-12'	SB-66 0-4'	SB-67 2-6'	SB-68 2-6'	SB-69 2-6'	SB-70 2-6'	SB-71 2-6'	SB-72 2-4'	SB-73 0-8'	SB-74 2-4'
Sample Type		Composite	Discrete	Discrete	Discrete	Discrete	Discrete	Discrete	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
pH at 25 Degrees Celsius	2.0 ≤ pH ≤ 12.5	10.8	NA	NA	NA	NA	NA	NA	9.53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.17	NA
Flashpoint (Degrees Fahrenheit)	>140° F	**124.15**	>210	>210	NA	NA	NA	NA	>210	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	>210	NA
Reactive Sulfide (mg/kg)	<500 mg/l	<20.0	NA	NA	NA	NA	NA	NA	<20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0J	NA
Reactive Cyanide (mg/kg)	<250 mg/l	<0.20	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.20	NA
Specific Gravity	unitless	1.4	NA	NA	NA	NA	NA	NA	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.0	NA
Paint Filter	No Free Liquids	pass	NA	NA	NA	NA	NA	NA	pass	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	pass	NA
Diesel Range Organics (mg/kg)		2,610	NA	NA	NA	NA	NA	NA	64.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Range Organics (mg/kg)		4,310	NA	NA	NA	NA	NA	NA	48.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TCLP VOCs (mg/L)																					
Benzene	<0.5	<0.0050	NA	NA	<0.0050	<0.0050	<0.012	<0.0050	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Carbon Tetrachloride	<0.5	<0.0050	NA	NA	<0.0050	<0.0050	<0.012	<0.0050	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chlorobenzene	<100.0	<0.0050	NA	NA	<0.0050	<0.0050	<0.012	<0.0050	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloroform	<6.0	<0.025	NA	NA	<0.025	<0.025	<0.062	<0.025	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichloroethane	<0.5	<0.0017	NA	NA	<0.0017	<0.0017	<0.0042	<0.0017	NA	<0.0017	<0.0017	<0.0017	<0.0017	0.0035J	<0.0017	0.0071J	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017
1,1-Dichloroethylene	<0.7	<0.0041	NA	NA	<0.0041	<0.0041	<0.010	<0.0041	NA	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041
Methyl Ethyl Ketone	<200.0	<0.030	NA	NA	<0.030	<0.030	<0.074	<0.030	NA	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Tetrachloroethylene	<0.7	<0.0050	NA	NA	<0.0050	<0.0050	<0.012	<0.0050	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Trichloroethylene	<0.5	<0.0033	NA	NA	<0.0033	0.13	**2.2**	0.047	NA	<0.0033	0.0053J	0.0058J	0.0074J	**1.3**	0.0095J	**1.2**	0.071	0.0039J	0.041	0.037	0.0074J
Vinyl Chloride	<0.2	<0.0018	NA	NA	<0.0018	<0.0018	<0.0044	<0.0018	NA	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018
TCLP SVOCs (mg/L)																					
1,4-Dichlorobenzene	<7.5	<0.019	NA	NA	NA	NA	NA	NA	<0.019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.019	NA
Hexachloro-1,3-butadiene	<0.5	<0.018	NA	NA	NA	NA	NA	NA	<0.018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.018	NA
Hexachlorobenzene	<0.13	<0.0057	NA	NA	NA	NA	NA	NA	<0.0057	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0057	NA
Hexachloroethane	<3.0	<0.015	NA	NA	NA	NA	NA	NA	<0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.015	NA
2-Methylphenol (o-Cresol)	<200.0	<0.0096	NA	NA	NA	NA	NA	NA	<0.0096	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0096	NA
3&4 Methylphenol (m-Cresol)	<200.0	<0.013	NA	NA	NA	NA	NA	NA	<0.013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.013	NA
2,4-Dinitrotoluene	<0.13	<0.010	NA	NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.010	NA
Nitrobenzene	<2.0	<0.010	NA	NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.010	NA
Pentachlorophenol	<100.0	<0.0075	NA	NA	NA	NA	NA	NA	<0.0075	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0075	NA
Phenol	<2000	<5.4	NA	NA	NA	NA	NA	NA	<5.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.4	NA
Pyridine	<5.0	<0.015	NA	NA	NA	NA	NA	NA	<0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.015	NA
2,4,5-Trichlorophenol	<400.0	<0.0076	NA	NA	NA	NA	NA	NA	<0.0076	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0076	NA
2,4,6-Trichlorophenol	<2.0	<0.011	NA	NA	NA	NA	NA	NA	<0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.011	NA
TCLP Metals (mg/L)																					
Arsenic	<5.0	1.0	NA	NA	<0.12	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	NA
Barium	<100.0	1.3J	NA	NA	NA	NA	NA	NA	<1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.2	NA
Cadmium	<1.0	<0.012	NA	NA	NA	NA	NA	NA	<0.012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.012	NA
Chromium	<5.0	1.5	NA	NA	<0.12	<0.12	<0.12	<0.12	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	NA
Copper	<200.0	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.14J	NA
Lead	<5.0	<0.015	NA	NA	0.018J	<0.015	<0.015	0.054J	<0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.095	NA
Mercury	<0.2	0.00016J	NA	NA	NA	NA	NA	NA	0.00044	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.00013	NA
Nickel	<35.0	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	NA
Selenium	<1.0	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	NA
Silver	<5.0	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.12	NA
Zinc	<500.0	<0.12	NA	NA	NA	NA	NA	NA	<0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.9	NA
PCBs (mg/kg)																					
Aroclor 1016	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	NA
Aroclor 1221	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	NA
Aroclor 1232	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	NA
Aroclor 1242	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	NA
Aroclor 1248	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	NA
Aroclor 1254	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	NA
Aroclor 1260	---	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.11	NA
Total PCBs	<50	<0.025	NA	NA	NA	NA	NA	NA	<0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	NA

Boxed and bolded exceeds landfill acceptance limits
--- - No standard established
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
NA - not analyzed

PCB - Polychlorinated Biphenyls
SVOC - Semi-Volatile Organic Compounds
TCLP - Toxicity Characteristic Leaching Procedure
VOC - Volatile Organic Compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon Street, Milwaukee, Wisconsin

PARAMETERS	Preventive Action Limit	Enforcement Standard	TW-1	TW-2	TW-3	TW-4	TW-5	TW-6	TW-7	TW-8	TW-9	TW-10	TW-2	TW-42
Date Collected			3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	8/27/2015	9/19/2016
VOCs (ug/l)														
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.6J
Benzene	0.5	5	<0.033	<0.33	<0.33	<0.33	*2.8*	*0.75*	<160	<160	1.8	<33	*1.3*	<0.50
n-Butylbenzene	---	---	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	270	<160	<0.33	<33	<0.50	<0.50
sec-Butylbenzene	---	---	<0.33	<0.33	<0.33	<0.33	25	<0.33	250	<160	0.66	<33	<2.2	<2.2
tert-Butylbenzene	---	---	<0.33	<0.33	<0.33	<0.33	20	1.9	<160	<160	<0.33	<33	<0.18	<0.18
Chlorobenzene	---	---	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.50	<0.50
Chloroethane	80	400	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.37	<0.37
Chloroform	0.6	6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<820	<820	<1.6	<160	<2.5	<2.5
Chloromethane	3	30	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.50	<0.50
1,1-Dichloroethane	85	850	2.7	35	0.53	11	<0.33	<0.33	<160	<160	<0.33	<33	<0.24	<0.24
1,2-Dichloroethane	0.5	5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.17	<0.17
1,1-Dichloroethene	0.7	7	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.41	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	5.4	0.88	1.1	0.4	<0.33	<160	<160	<0.33	<33	<0.26	<0.26
trans-1,2-Dichloroethene	20	100	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.26	<0.26
1,2-Dichloropropane	0.5	5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.23	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.50	0.66J
Ethylbenzene	140	700	<0.33	<0.33	<0.33	<0.33	4.4	<0.33	***2,000***	***900***	2.1	***5,700***	0.96J	<0.50
Isopropylbenzene	---	---	<0.33	<0.33	<0.33	<0.33	8.2	<0.33	610	<160	<0.33	110	1.3	0.25J
p-Isopropyltoluene	---	---	<0.33	<0.33	<0.33	<0.33	11	2.5	510	<160	<0.33	<33	6.5	<0.50
Methylene Chloride	0.5	5	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<820	<820	<1.6	<160	<0.23	<0.23
Naphthalene	10	100	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<820	<820	<1.6	***160***	<2.5	<2.5
n-Propylbenzene	---	---	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	0.6	<33	<0.50	<0.50
Styrene	10	100	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.50	<0.50
Tetrachloroethene	0.5	5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.50	<0.50
Toluene	160	800	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	***10,000***	***1,900***	<1.6	*250*	23.1	<0.50
1,1,1-Trichloroethane	40	200	1.8	*57*	<0.33	*56*	<0.33	<0.33	<160	<160	<0.33	<33	<0.50	<0.50
1,1,2-Trichloroethane	0.5	5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.20	<0.20
Trichloroethene	0.5	5	<0.33	***36***	***5.6***	***17***	*0.98*	<0.33	<160	<160	*1.7*	<33	<0.33	<0.33
1,2,4-Trimethylbenzene	---	---	<0.33	<0.33	<0.33	<0.33	420	32	5,700	1,900	4.4	120	<0.50	<0.50
1,3,5-Trimethylbenzene	---	--	<0.33	<0.33	<0.33	<0.33	1.1	3.6	2,600	980	2.3	36	<0.50	<0.50
Trimethylbenzenes	96	480	<0.33	<0.33	<0.33	<0.33	*421.1*	<0.33	***8,300***	***2,880***	<0.33	<33	<0.50	<0.50
Vinyl chloride	0.02	0.2	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<160	<160	<0.33	<33	<0.18	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.0	<1.0
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.71J	<0.50
Total Xylene	400	2000	<0.66	<0.66	<0.66	<0.66	1.7	8	***19,000***	***8,100***	4.2	***12,000***	9.71J	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon Street, Milwaukee, Wisconsin

PARAMETERS	Preventive Action Limit	Enforcement Standard	TW-1	TW-2	TW-3	TW-4	TW-5	TW-6	TW-7	TW-8	TW-9	TW-10	TW-2	TW-42
Date Collected			3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	3/29/2006	8/27/2015	9/19/2016
RCRA Metals (ug/l)														
Arsenic, Dissolved	1	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	***27.6***	NA
Barium, Dissolved	400	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	64.4	NA
Cadmium, Dissolved	0.5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.60	NA
Chromium, Dissolved	10	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.1	NA
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Dissolved	1.5	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3.0	NA
Selenium, Dissolved	10	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6.7	NA
Silver, Dissolved	10	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.7	NA
Mercury, Dissolved	0.2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	NA
PAHs (ug/l)														
Acenaphthene	---	---	<0.36	<0.36	<0.36	<0.36	6.0	0.78	68	9.6	4.0	NA	2.0	NA
Acenaphthylene	---	---	<0.29	<0.29	<0.29	<0.29	<2.9	0.53	8.4	0.36	<0.29	NA	2.1	NA
Anthracene	600	3000	<0.35	<0.35	<0.35	<0.35	6.8	<0.35	100	7.6	<0.35	NA	6.9	NA
Benzo(a)anthracene	---	---	<0.30	<0.30	<0.30	<0.30	<3.0	<0.30	100	6.9	<0.30	NA	19.1	NA
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	<0.29	<0.29	<2.9	<0.29	***69***	***3.3***	<0.29	NA	***20.0***	NA
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	<0.36	<0.36	***3.7***	<0.36	***120***	***4.7***	<0.36	NA	***24.9***	NA
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	<0.28	<0.28	<2.8	<0.28	32	10	<0.28	NA	11.3	NA
Benzo(k)fluoranthene	---	---	<0.46	<0.46	<0.46	<0.46	<4.6	<0.46	130	2.4	<0.46	NA	10.1	NA
Chrysene	0.02	0.2	<0.34	<0.34	<0.34	<0.34	<3.4	<0.34	***84***	***4.8***	<0.34	NA	***22.5***	NA
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	<0.29	<0.29	<2.9	<0.29	10	0.32	<0.29	NA	2.5	NA
Fluoranthrene	80	400	<0.25	<0.25	<0.25	<0.25	10	0.39	***310***	24	<0.25	NA	51.7	NA
Fluorene	80	400	<0.30	<0.30	<0.30	<0.30	7.6	0.46	*91*	7.4	1.1	NA	2.5	NA
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	<0.35	<0.35	<3.5	<0.35	29	1.1	<0.35	NA	9.9	NA
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.7	NA
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.7	NA
Naphthalene	10	100	0.59	0.3	<0.25	<0.25	*33*	3.3	***1,600***	***180***	*32*	NA	1.7	NA
Phenanthrene	---	---	<0.20	<0.20	<0.20	<0.20	20	1.4	440	46	1.6	NA	28.5	NA
Pyrene	50	250	<0.29	<0.29	<0.29	<0.29	8.7	0.29	***270***	21	<0.29	NA	29.6	NA

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	TW-45	TW-47	TW-50	TW-51	TW-52	TW-54	TW-57	TW-59	TW-61	TW-83	TW-85	TW-86
Date Collected			9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/26/2016	9/26/2016	9/26/2016
VOCs (ug/l)														
Acetone	1800	9000	21.2	***189,000***	<3.0	3.0J	6.3J	<3.0	<29.5	7.3J	<2,950	<59.1	<7.4	<591
Benzene	0.5	5	<0.50	<500	***5.2***	<0.50	***5.0***	<0.50	<5.0	<0.50	<500	***66.9***	<1.2	<100
n-Butylbenzene	---	---	<0.50	<500	22.9	<0.50	8.5	<0.50	135	<0.50	<500	24.9	27.3	<100
sec-Butylbenzene	---	---	<2.2	<2190	49.4	<2.2	23.0	<2.2	181	<2.2	<2,190	<43.7	32.2	<437
tert-Butylbenzene	---	---	<0.18	<180	6.3	<0.18	5.4	<0.18	28.3	1.7	<180	5.0J	6.1	<36.1
Chlorobenzene	---	---	<0.50	<500	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<500	<10.0	<1.2	<100
Chloroethane	80	400	<0.37	<375	3.1	<0.37	0.72J	<0.37	<3.7	<0.37	<375	<7.5	<0.94	<74.9
Chloroform	0.6	6	<2.5	<2500	<2.5	<2.5	<2.5	<2.5	<25.0	<2.5	<2500	<50.0	<6.2	<500
Chloromethane	3	30	<0.50	<500	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<500	<10.0	<1.2	<100
1,1-Dichloroethane	85	850	<0.24	<242	0.48J	3.0	0.67J	<0.24	<2.4	<0.24	<242	<4.8	<0.60	<48.3
1,2-Dichloroethane	0.5	5	<0.17	<168	0.41J	<0.17	<0.17	<0.17	<1.7	<0.17	<168	<3.4	<0.42	<33.6
1,1-Dichloroethene	0.7	7	<0.41	<410	<0.41	<0.41	<0.41	<0.41	<4.1	<0.41	<410	<8.2	<1.0	<82.0
cis-1,2,-Dichloroethene	7	70	<0.26	<256	0.51J	<0.26	0.38J	<0.26	<2.6	<0.26	<256	<5.1	<0.64	<51.2
trans-1,2-Dichloroethene	20	100	<0.26	<257	1.7	<0.26	<0.26	<0.26	<2.6	<0.26	<257	<5.1	<0.64	<51.3
1,2-Dichloropropane	0.5	5	<0.23	<233	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23	<233	<4.7	<0.58	<46.6
Diisopropyl ether	---	---	6.6	<500	0.95J	<0.50	<0.50	<0.50	<5.0	<0.50	<500	<10.0	<1.2	<100
Ethylbenzene	140	700	1.8	<500	<0.50	<0.50	<0.50	0.55J	5.2J	<0.50	***63,400***	***1,180***	2.3J	***1,690***
Isopropylbenzene	---	---	2.4	<143	143	<0.14	64.9	0.31J	1,580	0.71J	2,230	276	713	78.2J
p-Isopropyltoluene	---	---	<0.50	<500	<0.50	<0.50	<0.50	<0.50	10.0	<0.50	<500	43.8	<1.2	<100
Methylene Chloride	0.5	5	<0.23	<233	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23	<233	<4.7	<0.58	<46.5
Naphthalene	10	100	<2.5	<2500	<2.5	<2.5	<2.5	<2.5	<25.0	<2.5	<2500	***124***	<6.2	<500
n-Propylbenzene	---	---	1.0	<500	184	<0.50	72.6	<0.50	561	<0.50	1,300	117	92.4	<100
Styrene	10	100	<0.50	<500	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<500	<10.0	<1.2	<100
Tetrachloroethene	0.5	5	<0.50	<500	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<500	<10.0	<1.2	<100
Toluene	160	800	2.3	***894J***	<0.50	<0.50	0.57J	<0.50	<5.0	<0.50	*764J*	***824***	1.5J	***4,580***
1,1,1-Trichloroethane	40	200	<0.50	<500	1.9	1.3	<0.50	<0.50	<5.0	<0.50	<500	<10.0	<1.2	<100
1,1,2-Trichloroethane	0.5	5	<0.20	<197	<0.20	<0.20	<0.20	<0.20	<2.0	<0.20	<197	<3.9	<0.49	<39.5
Trichloroethene	0.5	5	<0.33	<331	***7.7***	0.44J	1.2	<0.33	<3.3	<0.33	<331	<6.6	<0.83	<66.1
1,2,4-Trimethylbenzene	---	---	<0.50	<500	10.7	<0.50	19.5	<0.50	<5.0	<0.50	3,220	1,030	62.5	1,130
1,3,5-Trimethylbenzene	---	--	<0.50	<500	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	1,280	312	3.2	506
Trimethylbenzenes	96	480	<0.50	<500	10.7	<0.50	19.5	<0.50	<5.0	<0.50	***4,500***	***1,342***	65.7	***1,636***
Vinyl chloride	0.02	0.2	<0.18	<176	***0.39J***	<0.18	<0.18	<0.18	<1.8	<0.18	<176	<3.5	<0.44	<35.1
m&p Xylene	---	---	5.3	1,410J	<1.0	<1.0	2.3	1.8J	<10.0	<1.0	194,000	7,700	7.3	26,300
o-Xylene	---	---	1.2	<500	<0.50	<0.50	<0.50	<0.50	<5.0	0.65J	76,000	2,150	<1.2	12,700
Total Xylene	400	2000	6.5	*1,410*	<1.0	<1.0	2.3	1.8J	<10.0	0.65J	***270,000***	***9,850***	7.3	***39,000***

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	TW-45	TW-47	TW-50	TW-51	TW-52	TW-54	TW-57	TW-59	TW-61	TW-83	TW-85	TW-86
Date Collected			9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/19/2016	9/26/2016	9/26/2016	9/26/2016
RCRA Metals (ug/l)														
Arsenic, Dissolved	1	10	NA	NA	NA	NA	NA	*8.0J*	***24.4***	***41.2***	***4,480***	***202,000***	***547***	***507,000***
Barium, Dissolved	400	2000	NA	NA	NA	NA	NA	178	236	65.2	22.1	391	*662*	173
Cadmium, Dissolved	0.5	5	NA	NA	NA	NA	NA	<0.60	<0.60	<0.60	***6.8***	***49.0J***	<0.60	***151J***
Chromium, Dissolved	10	100	NA	NA	NA	NA	NA	*15.7*	*16.4*	***6,820***	***148***	NA	NA	NA
Chromium, Total	10	100	NA	NA	NA	NA	NA	*76*	*73*	***8,300***	***1,500***	***950***	***720***	***15,000***
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	<2.5H	<2.5	6,600	2.9J	4.1J, F1	6.1J	<5.1
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	76	73	1,700	1,500	950	710	15,000
Lead, Dissolved	1.5	15	NA	NA	NA	NA	NA	***25.9***	***22***	<3.0	<3.0	*9.0J*	<3.0	***210***
Selenium, Dissolved	10	50	NA	NA	NA	NA	NA	7.2J	<6.7	*16.5J*	7.4J	9.0J	<6.7	*18.5J*
Silver, Dissolved	10	50	NA	NA	NA	NA	NA	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7
Mercury, Dissolved	0.2	2	NA	NA	NA	NA	NA	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	*0.32J*
PAHs (ug/l)														
Acenaphthene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	600	3000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.02	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	0.02	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.02	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthrene	80	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	80	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	10	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	50	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-1							
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	12/21/2015
VOCs (ug/l)										
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	<0.33	<0.31	<0.31	<0.31	<0.29	<0.29	<0.29	<0.50
n-Butylbenzene	---	---	<0.33	<0.24	<0.24	<0.24	<0.23	<0.23	<0.23	<0.50
sec-Butylbenzene	---	---	<0.33	<0.28	<0.28	<0.28	<0.22	<0.22	<0.22	<2.2
tert-Butylbenzene	---	---	<0.33	<0.30	<0.30	<0.30	<0.20	<0.20	<0.20	<0.18
Chlorobenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.26	<0.26	<0.26	<0.50
Chloroethane	80	400	<0.33	<0.46	<0.46	<0.46	<0.86	<0.86	<0.86	<0.37
Chloroform	0.6	6	<1.6	<0.54	<0.54	<0.54	<0.33	<0.33	<0.33	<2.5
Chloromethane	3	30	<0.33	<0.65	<0.65	<0.65	<0.25	<0.25	<0.25	<0.50
1,1-Dichloroethane	85	850	<0.33	5	4.1	9.3	7.9	10	12	5.0
1,2-Dichloroethane	0.5	5	<0.33	<0.34	<0.34	<0.34	<0.27	<0.27	<0.27	<0.17
1,1-Dichloroethene	0.7	7	*4.0*	0.5	0.44	0.44	<0.50	<0.50	<0.50	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	<0.44	<0.44	<0.44	<0.38	0.67	0.40	0.52J
trans-1,2-Dichloroethene	20	100	<0.33	<0.33	<0.33	<0.33	<0.30	<0.30	<0.30	<0.26
1,2-Dichloropropane	0.5	5	<0.33	<0.54	<0.54	<0.54	<0.52	<0.52	<0.52	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	<0.50
Ethylbenzene	140	700	<0.33	<0.26	<0.26	<0.26	<0.22	<0.22	<0.22	<0.50
Isopropylbenzene	---	---	<0.33	<0.29	<0.29	<0.29	<0.19	<0.19	<0.19	<0.14
p-Isopropyltoluene	---	---	<0.33	<0.29	<0.29	<0.29	<0.21	<0.21	<0.21	<0.50
Methylene Chloride	0.5	5	<1.6	<0.38	<0.38	<0.38	<0.30	<0.30	<0.30	<0.23
Naphthalene	10	100	<1.6	<0.27	<0.27	<0.27	<0.17	<0.17	<0.17	<2.5
n-Propylbenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.22	<0.22	<0.22	<0.50
Styrene	10	100	<0.33	<0.27	<0.27	<0.27	<0.38	<0.38	<0.38	<0.50
Tetrachloroethene	0.5	5	<0.33	<0.43	<0.43	<0.43	<0.29	<0.29	<0.29	<0.50
Toluene	160	800	<1.6	<0.32	<0.32	<0.32	<0.27	<0.27	<0.27	<0.50
1,1,1-Trichloroethane	40	200	10.0	3.5	3.9	3.4	1.8	22	2.2	8.2
1,1,2-Trichloroethane	0.5	5	<0.33	<0.40	<0.40	<0.40	<0.45	<0.45	<0.45	<0.20
Trichloroethene	0.5	5	***6.0***	*2.6*	*2.2*	*2.6*	*1.7*	***12***	*2.1*	***15.5***
1,2,4-Trimethylbenzene	---	---	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	<0.20	<0.50
1,3,5-Trimethylbenzene	---	--	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	<0.20	<0.50
Trimethylbenzenes	96	480	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	<0.20	<0.50
Vinyl chloride	0.02	0.2	<0.33	<0.31	<0.31	<0.31	<0.27	<0.27	<0.27	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	<1.0
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	<0.50
Total Xylene	400	2000	<0.33	<0.52	<0.52	<0.52	<0.86	<0.86	<0.86	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-1							
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	12/21/2015
RCRA Metals (ug/l)										
Arsenic, Dissolved	1	10	<7.9	<7.9	NA	NA	NA	NA	NA	<7.2
Barium, Dissolved	400	2000	55	25	NA	NA	NA	NA	NA	93.3
Cadmium, Dissolved	0.5	5	<0.70	<0.70	NA	NA	NA	NA	NA	<0.60
Chromium, Dissolved	10	100	<2.3	<2.3	NA	NA	NA	NA	NA	2.3J
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Dissolved	1.5	15	<2.4	<0.22	NA	NA	NA	NA	NA	<3.0
Selenium, Dissolved	10	50	<9.2	NA	NA	NA	NA	NA	NA	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	NA	NA	NA	NA	NA	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	NA	NA	NA	NA	NA	<0.10
PAHs (ug/l)										
Acenaphthene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	<0.0048
Acenaphthylene	---	---	<0.36	<0.36	NA	NA	NA	NA	NA	<0.0048
Anthracene	600	3000	<0.29	<0.29	NA	NA	NA	NA	NA	<0.0039
Benzo(a)anthracene	---	---	<0.30	<0.30	NA	NA	NA	NA	NA	<0.0050
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	NA	NA	NA	NA	NA	<0.0043
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	NA	NA	NA	NA	NA	<0.0052
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	NA	NA	NA	NA	NA	<0.0034
Benzo(k)fluoranthene	---	---	<0.46	<0.46	NA	NA	NA	NA	NA	<0.0055
Chrysene	0.02	0.2	<0.34	<0.34	NA	NA	NA	NA	NA	<0.0041
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	NA	NA	NA	NA	NA	<0.0054
Fluoranthrene	80	400	<0.25	<0.25	NA	NA	NA	NA	NA	<0.0091
Fluorene	80	400	<0.30	<0.30	NA	NA	NA	NA	NA	<0.0039
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	<0.0035
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	0.0057J
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	0.0040J
Naphthalene	10	100	<0.25	<0.25	NA	NA	NA	NA	NA	0.0092J
Phenanthrene	---	---	<0.20	<0.20	NA	NA	NA	NA	NA	<0.0074
Pyrene	50	250	<0.29	<0.29	NA	NA	NA	NA	NA	<0.0075

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-2								
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	*1.8*	*2.7*	*0.59*	*1.5*	*0.5*	<0.29	*2.3*	<0.29	<2.5
n-Butylbenzene	---	---	<0.33	<0.24	<0.24	<0.24	<0.23	<0.23	0.26	<0.23	<2.5
sec-Butylbenzene	---	---	<0.33	<0.28	<0.28	<0.28	<0.22	<0.22	<0.22	<0.22	<10.9
tert-Butylbenzene	---	---	<0.33	<0.30	<0.30	<0.30	<0.20	<0.20	<0.20	<0.20	<0.90
Chlorobenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.26	<0.26	<0.26	<0.26	<2.5
Chloroethane	80	400	6.9	7.9	3.6	6.2	6.5	1.6	<0.86	<0.86	<1.9
Chloroform	0.6	6	<1.6	<0.54	*1*	*0.81*	*0.77*	*2*	<0.33	<0.33	<12.5
Chloromethane	3	30	<0.33	<0.65	<0.65	<0.65	<0.25	<0.25	<0.25	<0.25	<2.5
1,1-Dichloroethane	85	850	*340*	*300*	*350*	*340*	*440*	*340*	*150*	*160*	*537*
1,2-Dichloroethane	0.5	5	*2.0*	*1.5*	*1.4*	*2.2*	*1.1*	*2*	*1.3*	<0.27	*1.6J*
1,1-Dichloroethene	0.7	7	***19***	***36***	***18***	***15***	***8.6***	***11***	***14***	*5.0*	***9.0***
cis-1,2,-Dichloroethene	7	70	***270***	***410***	***82***	***200***	***71***	*17*	***140***	*32*	*9.1*
trans-1,2-Dichloroethene	20	100	***110***	***140***	*25*	***100***	*35*	5.4	*49*	*24*	5.1
1,2-Dichloropropane	0.5	5	<0.33	<0.54	<0.54	<0.54	<0.52	<0.52	<0.52	<0.52	<1.2
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<2.5
Ethylbenzene	140	700	0.92	0.84	0.84	0.38	<0.22	<0.22	<0.22	<0.22	<2.5
Isopropylbenzene	---	---	<0.33	<0.29	<0.29	<0.29	<0.19	<0.19	<0.19	<0.19	1.2J
p-Isopropyltoluene	---	---	<0.33	<0.29	<0.29	<0.29	<0.21	<0.21	<0.21	<0.21	<2.5
Methylene Chloride	0.5	5	<1.6	<0.38	<0.38	<0.38	<0.30	<0.30	0.41	<0.30	<1.2
Naphthalene	10	100	1.8	1.2	<0.27	<0.27	<0.17	<0.17	1.8	<0.17	<12.5
n-Propylbenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.22	<0.22	0.38	<0.22	<2.5
Styrene	10	100	<0.33	<0.27	<0.27	<0.27	<0.38	<0.38	<0.38	<0.38	<2.5
Tetrachloroethene	0.5	5	<0.33	<0.43	<0.43	<0.43	<0.29	<0.29	<0.29	<0.29	<2.5
Toluene	160	800	<1.6	2.3	2.3	0.93	<0.27	<0.27	0.44	<0.27	<2.5
1,1,1-Trichloroethane	40	200	*130*	*81*	***410***	*190*	***320***	***500***	*52*	***520***	***302***
1,1,2-Trichloroethane	0.5	5	*0.7*	<0.40	*0.6*	*0.65*	<0.45	*1.1*	<0.45	<0.45	<0.99
Trichloroethene	0.5	5	***100***	***120***	***110***	***100***	***76***	***300***	***140***	***150***	***271***
1,2,4-Trimethylbenzene	---	---	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	<0.20	<0.26	<2.5
1,3,5-Trimethylbenzene	---	--	<0.33	<0.25	<0.25	<0.25	<0.22	<0.22	<0.22	<0.20	<2.5
Trimethylbenzenes	96	480	<0.33	<0.25	<0.25	<0.25	<0.22	<0.22	<0.22	<0.20	<2.5
Vinyl chloride	0.02	0.2	***250***	***720***	***30***	***130***	***60***	***7.2***	***210***	***51***	***11.5***
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<5.0
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<2.5
Total Xylene	400	2000	2.5	2.0	<0.52	0.5	<0.86	<0.86	<0.86	<0.86	<5.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-2								
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	<7.9	<7.9	NA	NA	NA	NA	NA	NA	<7.2
Barium, Dissolved	400	2000	180	120	NA	NA	NA	NA	NA	NA	68.7
Cadmium, Dissolved	0.5	5	<0.70	<0.70	NA	NA	NA	NA	NA	NA	<0.60
Chromium, Dissolved	10	100	<2.3	<2.3	NA	NA	NA	NA	NA	NA	<2.1
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Dissolved	1.5	15	<2.4	<0.22	NA	NA	NA	NA	NA	NA	*3.4J*
Selenium, Dissolved	10	50	<9.2	NA	NA	NA	NA	NA	NA	NA	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	NA	NA	NA	NA	NA	NA	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	NA	NA	NA	NA	NA	NA	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	0.43	0.54	NA	NA	NA	NA	NA	NA	0.019J
Acenaphthylene	---	---	3.9	4.2	NA	NA	NA	NA	NA	NA	<0.0046
Anthracene	600	3000	<0.29	<0.29	NA	NA	NA	NA	NA	NA	0.019J
Benzo(a)anthracene	---	---	<0.30	<0.30	NA	NA	NA	NA	NA	NA	0.021J
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	NA	NA	NA	NA	NA	NA	0.011J
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	NA	NA	NA	NA	NA	NA	*0.020J*
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	NA	NA	NA	NA	NA	NA	0.0087J
Benzo(k)fluoranthene	---	---	<0.46	<0.46	NA	NA	NA	NA	NA	NA	0.0090J
Chrysene	0.02	0.2	<0.34	<0.34	NA	NA	NA	NA	NA	NA	*0.020J*
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0052
Fluoranthrene	80	400	0.32	0.31	NA	NA	NA	NA	NA	NA	0.039J
Fluorene	80	400	3.1	3.2	NA	NA	NA	NA	NA	NA	0.022J
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	NA	0.0074J
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.0029
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.0026
Naphthalene	10	100	1.8	1.2	NA	NA	NA	NA	NA	NA	0.0057J
Phenanthrene	---	---	2.0	2.2	NA	NA	NA	NA	NA	NA	0.051
Pyrene	50	250	<0.29	<0.29	NA	NA	NA	NA	NA	NA	0.032J

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-3								
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	0.42	*0.84*	<0.31	<0.31	*1.0*	<0.31	*1.1*	*0.65*	<0.50
n-Butylbenzene	---	---	<0.33	<0.24	<0.24	<0.24	<0.23	<0.23	<0.23	<0.23	<0.50
sec-Butylbenzene	---	---	<0.33	<0.28	<0.28	<0.28	<0.22	<0.22	<0.22	<0.22	<2.2
tert-Butylbenzene	---	---	<0.33	<0.30	<0.30	<0.30	<0.20	<0.20	<0.20	<0.20	<0.18
Chlorobenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.26	<0.26	<0.26	<0.26	<0.50
Chloroethane	80	400	<0.33	7.9	<0.46	<0.46	<0.86	<0.86	<0.86	<0.86	<0.37
Chloroform	0.6	6	<1.6	<0.54	<0.54	<0.54	<0.33	<0.33	<0.33	<0.33	<2.5
Chloromethane	3	30	<0.33	<0.65	<0.65	<0.65	<0.25	<0.25	<0.25	<0.25	<0.50
1,1-Dichloroethane	85	850	<0.33	2.6	1.1	2	2.4	1.2	1.8	<0.31	<0.24
1,2-Dichloroethane	0.5	5	<0.33	<0.34	<0.34	<0.34	<0.27	<0.27	<0.27	<0.31	<0.17
1,1-Dichloroethene	0.7	7	*1.7*	<0.44	<0.44	<0.44	<0.50	<0.50	<0.50	<0.27	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	6.5	<0.44	2.7	3.7	<0.38	3.1	1.5	<0.26
trans-1,2-Dichloroethene	20	100	<0.33	0.43	<0.33	<0.33	1.1	<0.30	0.59	<0.30	<0.26
1,2-Dichloropropane	0.5	5	*4.4*	<0.54	<0.54	<0.54	<0.52	<0.52	<0.52	<0.52	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.50
Ethylbenzene	140	700	<0.33	<0.26	<0.26	<0.26	<0.22	<0.22	<0.22	<0.22	<0.50
Isopropylbenzene	---	---	<0.33	<0.29	<0.29	<0.29	<0.19	<0.19	<0.19	<0.19	<0.14
p-Isopropyltoluene	---	---	<0.33	<0.29	<0.29	<0.29	<0.21	<0.21	<0.21	<0.21	<0.50
Methylene Chloride	0.5	5	<1.6	<0.38	<0.38	<0.38	<0.30	<0.30	<0.30	<0.30	<0.23
Naphthalene	10	100	<1.6	<0.27	<0.27	<0.27	<0.17	<0.17	1.5	<0.17	<2.5
n-Propylbenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.22	<0.22	<0.22	<0.22	<0.50
Styrene	10	100	<0.33	<0.27	<0.27	<0.27	<0.38	<0.38	<0.38	<0.38	<0.50
Tetrachloroethene	0.5	5	<0.33	<0.43	<0.43	<0.43	<0.29	<0.29	0.45	<0.29	<0.50
Toluene	160	800	<1.6	<0.32	<0.32	<0.32	<0.27	<0.27	<0.27	<0.27	<0.50
1,1,1-Trichloroethane	40	200	<0.33	<0.38	<0.38	1.3	0.41	1.2	<0.27	<0.27	<0.50
1,1,2-Trichloroethane	0.5	5	<0.33	<0.40	<0.40	<0.40	<0.45	<0.45	<0.45	<0.45	<0.20
Trichloroethene	0.5	5	*1.2*	*2.8*	*4.0*	*4.1*	*1.5*	*3.1*	*2.2*	<0.37	<0.33
1,2,4-Trimethylbenzene	---	---	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	0.64	<0.20	<0.50
1,3,5-Trimethylbenzene	---	--	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	<0.20	<0.20	<0.50
Trimethylbenzenes	96	480	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	0.64	<0.20	<0.50
Vinyl chloride	0.02	0.2	<0.33	<0.31	<0.31	<0.31	***4.5***	<0.27	<0.27	***1.1***	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.50
Total Xylene	400	2000	<0.33	<0.52	<0.52	<0.52	<0.86	<0.86	0.98	<0.86	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-3								
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	<7.9	<7.9	NA	NA	NA	NA	NA	NA	***15.8J***
Barium, Dissolved	400	2000	120	56	NA	NA	NA	NA	NA	NA	65.8
Cadmium, Dissolved	0.5	5	<0.70	<0.70	NA	NA	NA	NA	NA	NA	<0.60
Chromium, Dissolved	10	100	<2.3	<2.3	NA	NA	NA	NA	NA	NA	<2.1
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Dissolved	1.5	15	<2.4	<0.22	NA	NA	NA	NA	NA	NA	*3.5J*
Selenium, Dissolved	10	50	<9.2	NA	NA	NA	NA	NA	NA	NA	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	NA	NA	NA	NA	NA	NA	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	NA	NA	NA	NA	NA	NA	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	NA	0.0070J
Acenaphthylene	---	---	<0.36	<0.36	NA	NA	NA	NA	NA	NA	<0.0045
Anthracene	600	3000	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0037
Benzo(a)anthracene	---	---	<0.30	<0.30	NA	NA	NA	NA	NA	NA	<0.0047
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0040
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	NA	NA	NA	NA	NA	NA	<0.0048
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	NA	NA	NA	NA	NA	NA	*<0.0032*
Benzo(k)fluoranthene	---	---	<0.46	<0.46	NA	NA	NA	NA	NA	NA	<0.0051
Chrysene	0.02	0.2	<0.34	<0.34	NA	NA	NA	NA	NA	NA	<0.0039
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0051
Fluoranthrene	80	400	<0.25	<0.25	NA	NA	NA	NA	NA	NA	<0.0085
Fluorene	80	400	<0.30	<0.30	NA	NA	NA	NA	NA	NA	<0.0037
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	NA	<0.0033
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	0.0034J
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	0.0037J
Naphthalene	10	100	<0.25	<0.25	NA	NA	NA	NA	NA	NA	0.0051J
Phenanthrene	---	---	<0.20	<0.20	NA	NA	NA	NA	NA	NA	0.0080J
Pyrene	50	250	<0.29	<0.29	NA	NA	NA	NA	NA	NA	0.0080J

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-4								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	***58***	***59***	***19***	***40***	***43***	***56***	***76***	***50***	***82.4***
n-Butylbenzene	---	---	<3.3	34	<12	<0.24	<0.23	<0.23	8.2	<5.7	18.7
sec-Butylbenzene	---	---	0.046	50	<14	<0.28	4.1	33	18	34	27.9
tert-Butylbenzene	---	---	11	12	<15	11	8.4	9.6	8	<4.9	6.8
Chlorobenzene	---	---	<3.3	<6.1	<15	0.39	<0.26	<0.26	0.32	<6.5	<2.5
Chloroethane	80	400	<3.3	<9.2	<23	<0.46	<0.86	<0.86	<0.86	<21	<1.9
Chloroform	0.6	6	<16	<11	<27	<0.54	<1.4	<1.4	<1.4	<8.2	<12.5
Chloromethane	3	30	<3.3	<13	<32	<0.65	<0.33	<0.33	<0.33	<6.3	<2.5
1,1-Dichloroethane	85	850	<3.3	<6.3	<16	<0.34	<0.31	<0.31	<0.31	<14	<1.2
1,2-Dichloroethane	0.5	5	<3.3	<6.8	<17	<0.34	<0.27	<0.27	<0.27	<7.8	<0.84
1,1-Dichloroethene	0.7	7	<3.3	<8.8	<22	<0.44	<0.50	<0.50	<0.50	<6.8	<2.1
cis-1,2,-Dichloroethene	7	70	<3.3	<8.8	<22	0.8	0.7	0.6	1.1	<12	<1.3
trans-1,2-Dichloroethene	20	100	<3.3	<6.5	<16	<0.33	<0.30	<0.30	<0.30	<9.5	<1.3
1,2-Dichloropropane	0.5	5	<3.3	<11	<27	<0.54	<0.52	<0.52	<0.52	<7.5	<1.2
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<2.5
Ethylbenzene	140	700	3.6	30	<13	<0.26	4.1	41	36	<6.2	*220*
Isopropylbenzene	---	---	440	560	<14	<0.29	20	270	170	66	388
p-Isopropyltoluene	---	---	140	730	440	6.1	240	290	96	27	16.7
Methylene Chloride	0.5	5	<16	<7.6	<19	<0.38	<0.30	<0.30	<0.30	<7.4	***6.9***
Naphthalene	10	100	*19*	*15*	<13	*22*	*12*	*24*	*18*	*17*	*53.0*
n-Propylbenzene	---	---	22	200	<15	<0.31	1.4	110	52	<5.5	147
Styrene	10	100	<3.3	<5.4	<13	<0.27	<0.38	<0.38	<0.38	<9.5	<2.5
Tetrachloroethene	0.5	5	<3.3	<8.5	<21	<0.43	<0.29	<0.29	0.34	<7.3	<2.5
Toluene	160	800	<16	13	<16	0.97	0.88	2.8	3.1	<6.8	*245*
1,1,1-Trichloroethane	40	200	<3.3	<7.5	<19	<0.38	<0.27	<0.27	<0.27	<6.8	<2.5
1,1,2-Trichloroethane	0.5	5	<3.3	<8	<20	<0.40	<0.45	<0.45	<0.45	<11	<0.99
Trichloroethene	0.5	5	<3.3	<5.3	<13	<0.26	<0.37	0.39	*0.78*	<9.2	<1.7
1,2,4-Trimethylbenzene	---	---	180	140	50	15	44	190	140	150	433
1,3,5-Trimethylbenzene	---	--	56	46	33	41	4	26	24	37	152
Trimethylbenzenes	96	480	*236*	*186*	83	56	48	*216*	*164*	*187*	***585***
Vinyl chloride	0.02	0.2	<3.3	<6.1	<15	<0.31	<0.27	<0.27	<0.27	<6.8	<0.88
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	2,110
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	526
Total Xylene	400	2000	180	216	123	70	32	210	270	280	***2,636***

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-4								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	*4.3*	***2,200***	***4,100***	***3,500***	***2,000***	***4,700***	***4,600****	***2,400***	***9,080***
Barium, Dissolved	400	2000	0.075	31	51	52	39	76	67	33	71.7
Cadmium, Dissolved	0.5	5	<0.70	<0.70	<0.70	<0.70	<0.70	1	*1.6**	*1.6*	***47.2***
Chromium, Dissolved	10	100	0.03	*14*	*15*	*20*	*19*	*40*	***380****	*17*	*27.0*
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	*41.5*
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<97
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<97
Lead, Dissolved	1.5	15	<2.4	<0.22	<2.4	<2.4	<2.4	<2.4	***16****	*1.9*	*<3.0*
Selenium, Dissolved	10	50	<9.2	NA	*21*	<9.2	<9.2	<9.2	<6.5	6.5	<6.7
Silver, Dissolved	10	50	<2.5	*21*	<2.5	<2.5	<2.5	<2.5	<3.2	3.2	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	<0.044	<0.044	<0.044	<0.044	0.10	<0.044	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	4.5	3.1	<0.35	2.7	1.2	1.4	1.5	0.5	2.4
Acenaphthylene	---	---	2.8	3.1	4.4	3.2	3.5	3.4	4.1	1.3	0.056J
Anthracene	600	3000	0.32	<0.29	<0.29	<0.58	<0.38	<0.0017	<0.0014	<0.0014	0.67
Benzo(a)anthracene	---	---	0.68	<0.30	<0.30	<0.60	<0.39	0.29	0.11	0.23	0.083J
Benzo(a)pyrene	0.02	0.2	***0.29***	<0.29	<0.29	<0.58	<0.38	*0.10*	*0.05*	*0.11*	*0.024J*
Benzo(b)fluoranthene	0.02	0.2	***0.38***	<0.36	<0.36	<0.72	<0.47	*0.11*	*0.051*	*0.11*	*0.032J*
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	<0.28	<0.56	<0.36	<0.0013	0.018	0.053	<0.014
Benzo(k)fluoranthene	---	---	<0.48	<0.46	<0.46	<0.92	<0.60	<0.0026	0.033	0.066	<0.022
Chrysene	0.02	0.2	***0.53***	<0.34	<0.34	<0.68	<0.44	*0.16*	*0.10*	*0.16*	*0.062J*
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	<0.29	<0.58	<0.38	<0.0012	<0.00096	<0.00096	<0.022
Fluoranthrene	80	400	3.2	0.92	1.4	1.4	1.2	1.4	1.5	1	0.81
Fluorene	80	400	2.9	2.5	3.7	3.2	2.9	2.9	3.9	1.1	1.9
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	<0.35	<0.70	<0.46	<0.0014	0.015	<0.0012	<0.014
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	5.5
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	4.3
Naphthalene	10	100	*10*	9.2	*14*	*13*	*12*	*15*	*18*	5.9	*30.4*
Phenanthrene	---	---	8.8	5.1	7.2	6.5	6.0	6.0	7.7	2.6	3.5
Pyrene	50	250	2.4	0.58	0.96	0.9	0.81	0.97	1.1	0.65	0.80

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-5								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	<0.33	*3.2*	<0.31	*1.4*	***5.5***	<0.29	*0.98*	*3.5*	***6.8***
n-Butylbenzene	---	---	<0.33	3.6	<0.24	<0.24	<0.23	<0.23	0.28	13	2.2
sec-Butylbenzene	---	---	<0.33	6.2	<0.28	0.46	12	<0.22	0.51	19	5.0J
tert-Butylbenzene	---	---	2.4	30	<0.30	7.8	7.6	<0.20	4.1	9.7	3.3
Chlorobenzene	---	---	<0.33	<1.5	0.39	0.39	<0.26	<0.26	<0.26	<0.26	<0.50
Chloroethane	80	400	<0.33	<2.3	<0.46	<0.46	<0.86	<0.86	<0.86	<0.86	<0.37
Chloroform	0.6	6	<1.6	<2.7	<0.54	<0.54	<1.4	<1.4	<1.4	<1.4	<2.5
Chloromethane	3	30	<0.33	<3.2	<0.65	<0.65	<0.33	<0.33	<0.33	<0.33	<0.50
1,1-Dichloroethane	85	850	<0.33	<1.6	<0.34	<0.32	<0.31	<0.31	<0.31	<0.31	<0.24
1,2-Dichloroethane	0.5	5	<0.33	<1.7	<0.34	<0.34	<0.27	<0.27	<0.27	<0.27	<0.17
1,1-Dichloroethene	0.7	7	<0.33	<2.2	<0.44	<0.44	*0.98*	<0.50	<0.50	<0.50	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	<2.2	<0.44	0.45	0.52	<0.38	<0.38	<0.38	0.43J
trans-1,2-Dichloroethene	20	100	<0.33	<1.6	<0.33	<0.33	<0.30	<0.30	<0.30	<0.30	<0.26
1,2-Dichloropropane	0.5	5	<0.33	<2.7	<0.54	<0.54	<0.52	<0.52	<0.52	<0.52	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.50
Ethylbenzene	140	700	<0.33	<1.3	<0.26	<0.26	1.1	<0.22	<0.22	<0.22	0.93J
Isopropylbenzene	---	---	<0.33	12	<0.29	0.53	120	<0.19	<0.19	150	61.6
p-Isopropyltoluene	---	---	<0.33	3.6	1.1	1.3	2.5	0.6	<0.21	2.8	<0.50
Methylene Chloride	0.5	5	<1.6	<1.9	<0.38	<0.38	<0.30	0.31	<0.30	<0.30	<0.23
Naphthalene	10	100	<1.6	<1.3	<0.27	0.36	<0.17	0.8	1.4	<17	<2.5
n-Propylbenzene	---	---	<0.33	1.8	<0.31	<0.31	30	<0.22	<0.22	41	10.8
Styrene	10	100	<0.33	<1.3	<0.27	<0.27	<0.38	<0.38	<0.38	<0.38	<0.50
Tetrachloroethene	0.5	5	<0.33	<2.1	<0.43	<0.43	<0.29	<0.29	<0.29	<0.29	<0.50
Toluene	160	800	<1.6	<1.6	<0.32	<0.32	0.94	<0.27	<0.27	0.82	0.61J
1,1,1-Trichloroethane	40	200	<0.33	<1.9	<0.38	<0.38	0.41	<0.27	<0.27	<0.27	0.73J
1,1,2-Trichloroethane	0.5	5	<0.33	<2	<0.40	<0.40	<0.45	<0.45	<0.45	<0.45	<0.20
Trichloroethene	0.5	5	<0.33	<1.3	<0.26	<0.26	0.8	<0.37	<0.37	<0.37	*1.2*
1,2,4-Trimethylbenzene	---	---	<0.33	10	<0.25	9	47	<0.20	1.4	19	0.68J
1,3,5-Trimethylbenzene	---	--	<0.33	<1.3	<0.25	0.33	17	<0.20	<0.20	<20	<0.50
Trimethylbenzenes	96	480	<0.33	10	<0.025	9.33	58	<0.20	1.4	19	0.68J
Vinyl chloride	0.02	0.2	<0.33	<1.5	<0.31	<0.31	<0.27	<0.27	<0.27	<0.27	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	1.1J
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.50
Total Xylene	400	2000	<0.33	1.4	<0.52	0.9	2.5	<0.86	<0.86	<0.86	1.1J

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-5								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	***140***	***150***	***1,600***	***300***	***260***	<7.9	***1,600****	<5.4	***555***
Barium, Dissolved	400	2000	*470*	*440*	92	*520*	350	110	*730**	370	312
Cadmium, Dissolved	0.5	5	<0.70	<0.70	<0.70	<0.70	<0.70	*1.7*	*2.7**	<0.74	*2.7J*
Chromium, Dissolved	10	100	*12*	<2.3	*11*	<2.3	<2.3	2.9	***210****	<2	*24.8*
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	***892***
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<97
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	890
Lead, Dissolved	1.5	15	<2.4	<0.22	<2.4	*9.3*	*9.5*	*<2.4*	***22****	<1.9	*5.3J*
Selenium, Dissolved	10	50	<9.2	NA	***64***	<9.2	<9.2	*11*	<6.5	*23*	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	3.6	<3.2	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	<0.044	<0.044	<0.044	<0.044	*0.28*	<0.044	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	9.6	0.62	NA	NA	NA	NA	NA	NA	0.10J
Acenaphthylene	---	---	4.1	0.93	NA	NA	NA	NA	NA	NA	0.026J
Anthracene	600	3000	<2.9	<0.29	NA	NA	NA	NA	NA	NA	0.066J
Benzo(a)anthracene	---	---	3.1	0.5	NA	NA	NA	NA	NA	NA	0.054J
Benzo(a)pyrene	0.02	0.2	<2.9	<0.29	NA	NA	NA	NA	NA	NA	*0.030J*
Benzo(b)fluoranthene	0.02	0.2	<3.6	<0.36	NA	NA	NA	NA	NA	NA	*0.046J*
Benzo(g,h,i)perylene	---	---	<2.8	<0.28	NA	NA	NA	NA	NA	NA	0.029J
Benzo(k)fluoranthene	---	---	<4.6	<0.46	NA	NA	NA	NA	NA	NA	0.020J
Chrysene	0.02	0.2	<3.4	<0.34	NA	NA	NA	NA	NA	NA	*0.045J*
Dibenzo(a,h)anthracene	---	---	<2.9	<0.29	NA	NA	NA	NA	NA	NA	<0.016
Fluoranthrene	80	400	7.9	1.3	NA	NA	NA	NA	NA	NA	0.13J
Fluorene	80	400	4.2	0.83	NA	NA	NA	NA	NA	NA	0.086J
Indeno(1,2,3-cd)pyrene	---	---	<3.5	<0.35	NA	NA	NA	NA	NA	NA	0.020J
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	0.35
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	0.24
Naphthalene	10	100	<2.5	2.2	NA	NA	NA	NA	NA	NA	0.37
Phenanthrene	---	---	9.6	1.8	NA	NA	NA	NA	NA	NA	0.095J
Pyrene	50	250	6.5	1.0	NA	NA	NA	NA	NA	NA	0.13J

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-6								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	***170***	***120***	<160	***52***	***61***	***94***	***180***	***120***	***26.8J***
n-Butylbenzene	---	---	<16	<24	<120	<24	<11	<11	<11	<45	22.7J
sec-Butylbenzene	---	---	19	<28	<140	<28	<11	<11	<11	<44	<87.4
tert-Butylbenzene	---	---	<16	<30	<150	<30	<9.8	<9.8	<9.8	<39	<7.2
Chlorobenzene	---	---	<16	<31	<150	<31	<13	<13	<13	<52	<20.0
Chloroethane	80	400	<16	<46	<230	<46	<43	<43	<43	<170	<15.0
Chloroform	0.6	6	<82	<54	<270	<54	<72	<72	<72	<66	<100
Chloromethane	3	30	<16	<65	<320	<65	<16	<16	<16	<50	<20.0
1,1-Dichloroethane	85	850	<16	<32	<160	<32	<16	<16	<16	<110	<9.7
1,2-Dichloroethane	0.5	5	<16	<34	<170	<34	<14	<14	<14	<62	<6.7
1,1-Dichloroethene	0.7	7	<16	<44	<220	<44	<25	<25	<25	<55	<16.4
cis-1,2,-Dichloroethene	7	70	<16	<44	<220	<44	<19	<19	<19	<99	<10.2
trans-1,2-Dichloroethene	20	100	<16	<33	<160	<33	<15	<15	<15	<76	<10.3
1,2-Dichloropropane	0.5	5	<16	<54	<270	<54	<26	<26	<26	<60	<9.3
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<20.0
Ethylbenzene	140	700	***850***	99	***1,600***	***3,700***	***2,500***	<11	***2,600***	***5,700***	***3,280***
Isopropylbenzene	---	---	68	100	<140	130	72	<9.4	94	190	112
p-Isopropyltoluene	---	---	120	99	<140	350	80	56	120	150	60.1
Methylene Chloride	0.5	5	<82	<38	<190	<38	<15	***16***	***32***	<59	***71.8***
Naphthalene	10	100	<82	*70*	**<130**	*30*	***210***	*74*	***150***	***150***	<100
n-Propylbenzene	---	---	<16	<31	<150	110	59	<11	37	160	95.9
Styrene	10	100	<16	*28*	*<130*	<27	<19	<19	<38	<76	<20.0
Tetrachloroethene	0.5	5	<16	<43	<210	<43	<15	<15	<15	<59	<20.0
Toluene	160	800	100	<32	<160	<32	<13	20	<27	<54	<20.0
1,1,1-Trichloroethane	40	200	<16	<38	<190	<38	<14	<14	<14	<54	<20.0
1,1,2-Trichloroethane	0.5	5	<16	<40	<200	<40	<22	<22	<22	<90	<7.9
Trichloroethene	0.5	5	<16	<26	<130	<26	<18	<18	<18	<74	<13.2
1,2,4-Trimethylbenzene	---	---	1,300	1,500	960	1,300	710	1,100	1,400	1,700	1,060
1,3,5-Trimethylbenzene	---	--	420	490	350	490	210	380	500	600	322
Trimethylbenzenes	96	480	***1,720***	***1,990***	***1,310***	***1,790***	***920***	***1,480***	***1,900***	***2,300***	***1,382***
Vinyl chloride	0.02	0.2	<16	<31	<150	<31	<14	<14	<27	<55	<7.0
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	6,600
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	304
Total Xylene	400	2000	***8,500***	**17,870**	***12,400***	***13,000***	***7,900***	***22,000***	*1,700*	***20,000***	***6,904***

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-6								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	***610***	***630***	***890***	***410***	***660***	***1,800***	***720****	***180***	***625***
Barium, Dissolved	400	2000	36	30	27	36	63	23	65	32	28.2
Cadmium, Dissolved	0.5	5	<0.70	<0.70	<0.70	<0.70	<0.70	*1.2*	*2.5**	*1.2*	*2.8J*
Chromium, Dissolved	10	100	*36*	*17*	*81*	*19*	*49*	*16*	***640****	*18*	*57.7*
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	***465***
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<97
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	460J
Lead, Dissolved	1.5	15	<2.4	<0.22	<2.4	<2.4	*9.1*	<2.4	***19****	*4.9*	<3.0
Selenium, Dissolved	10	50	<9.2	NA	*25*	<9.2	<9.2	<9.2	<6.5	*26*	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<3.2	<3.2	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	<0.044	<0.044	<0.044	<0.044	0.08	<0.044	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	2,300	1.5	2.4	1.1	<0.42	6.4	3.9	1.9	1.4
Acenaphthylene	---	---	2,000	2.3	3.3	2.1	1.1	8.0	4.2	3.1	0.54J
Anthracene	600	3000	170	<0.29	<2.9	<0.29	<0.35	0.69	<0.0014	0.19	0.94J
Benzo(a)anthracene	---	---	1,900	1.4	2.2	0.89	<0.36	6.0	4.3	1.7	1.7
Benzo(a)pyrene	0.02	0.2	***1,300***	***0.68***	***1.2***	***0.48***	<0.35	***3.1***	***2.1***	***0.99***	***1.2***
Benzo(b)fluoranthene	0.02	0.2	***1,500***	***1.1***	***1.5***	***0.71***	<0.43	***4.1***	***3.0***	***1.2***	***1.9***
Benzo(g,h,i)perylene	---	---	620	0.43	0.52	<0.28	<0.34	1.40	0.91	0.48	0.85J
Benzo(k)fluoranthene	---	---	520	<0.46	0.7	<0.46	<0.55	2.0	0.90	0.49	0.60J
Chrysene	0.02	0.2	***2,000***	***1.0***	***1.4***	***0.64***	<0.41	***4.40***	***2.70***	***1.3***	***1.5***
Dibenzo(a,h)anthracene	---	---	300	<0.29	<0.29	<0.29	<0.35	0.5	0.3	0.1	0.17J
Fluoranthrene	80	400	***6,600***	4.6	7.2	3.2	0.8	22	11	8	3.6
Fluorene	80	400	***2,800***	2.1	3.1	1.7	0.8	7.1	4.0	2.6	1.1
Indeno(1,2,3-cd)pyrene	---	---	640	0.39	0.58	<0.35	<0.42	1.40	0.87	0.44	0.51J
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	13.8
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	17.2
Naphthalene	10	100	***27,000***	***100***	*99*	***110***	*68*	***190***	***170***	***160***	*88.9*
Phenanthrene	---	---	9,400	7.7	11	5.3	2.2	28	16	11	6.2
Pyrene	50	250	***5,600***	3.6	5.6	2.4	0.61	14	10	4.4	2.9

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-7						
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/16/2008	12/21/2015
VOCs (ug/l)									
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	<0.33	<0.31	<0.31	<0.31	<0.29	<0.29	<0.50
n-Butylbenzene	---	---	<0.33	<0.24	<0.24	<0.24	<0.23	<0.23	<0.50
sec-Butylbenzene	---	---	<0.33	1.0	<0.28	<0.28	1.3	<0.22	<2.2
tert-Butylbenzene	---	---	<0.33	1.2	1.2	1.9	0.67	0.38	<0.18
Chlorobenzene	---	---	<0.33	<0.31	<0.31	<0.31	0.65	<0.26	<0.50
Chloroethane	80	400	<0.33	<0.46	<0.46	<0.46	<0.86	<0.86	<0.37
Chloroform	0.6	6	<1.6	<0.54	<0.54	<0.54	<1.4	<1.4	<2.5
Chloromethane	3	30	<0.33	<0.65	<0.65	<0.65	<0.33	<0.33	<0.50
1,1-Dichloroethane	85	850	<0.33	<0.34	<0.34	<0.34	<0.31	<0.31	<0.24
1,2-Dichloroethane	0.5	5	<0.33	<0.34	<0.34	<0.34	<0.27	<0.27	<0.17
1,1-Dichloroethene	0.7	7	<0.33	<0.44	<0.44	<0.44	<0.50	<0.50	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	<0.44	<0.44	<0.44	<0.38	<0.38	<0.26
trans-1,2-Dichloroethene	20	100	<0.33	<0.33	<0.33	<0.33	<0.30	<0.30	<0.26
1,2-Dichloropropane	0.5	5	<0.33	<0.54	<0.54	<0.54	<0.52	<0.52	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	<0.50
Ethylbenzene	140	700	<0.33	0.65	<0.26	<0.26	<0.22	<0.22	<0.50
Isopropylbenzene	---	---	<0.33	<0.29	<0.29	<0.29	<0.19	<0.19	<0.14
p-Isopropyltoluene	---	---	0.52	<0.29	3.6	3.6	<0.21	<0.21	<0.50
Methylene Chloride	0.5	5	<1.6	<0.38	<0.38	<0.38	<0.30	<0.30	<0.23
Naphthalene	10	100	<1.6	<0.27	<0.27	<0.27	4.4	<0.17	<2.5
n-Propylbenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.22	<0.22	<0.50
Styrene	10	100	<0.33	<0.27	<0.27	<0.27	<0.38	<0.38	<0.50
Tetrachloroethene	0.5	5	<0.33	<0.43	<0.43	<0.43	<0.29	<0.29	<0.50
Toluene	160	800	<1.6	<0.32	<0.32	<0.32	<0.27	<0.27	<0.50
1,1,1-Trichloroethane	40	200	<0.33	<0.38	<0.38	<0.38	<0.27	<0.27	<0.50
1,1,2-Trichloroethane	0.5	5	<0.33	<0.40	<0.40	<0.40	<0.45	<0.45	<0.20
Trichloroethene	0.5	5	<0.33	<0.26	<0.26	<0.26	<0.37	<0.37	<0.33
1,2,4-Trimethylbenzene	---	---	<0.33	<0.25	<0.25	<0.25	0.34	0.34	<0.50
1,3,5-Trimethylbenzene	---	--	<0.33	<0.25	<0.25	<0.25	<0.20	<0.20	<0.50
Trimethylbenzenes	96	480	<0.33	<0.25	<0.25	<0.25	0.34	0.34	<0.50
Vinyl chloride	0.02	0.2	<0.33	<0.31	<0.31	<0.31	<0.27	<0.27	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	<1.0
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	<0.50
Total Xylene	400	2000	<0.33	0.78	<0.52	<0.52	<0.86	<0.86	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-7						
Date Collected			10/17/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/16/2008	12/21/2015
RCRA Metals (ug/l)									
Arsenic, Dissolved	1	10	<7.9	<7.9	<7.9	<7.9	NA	NA	<7.2
Barium, Dissolved	400	2000	190	94	190	94	NA	NA	18.9
Cadmium, Dissolved	0.5	5	<0.70	<0.70	<0.70	<0.70	NA	NA	<0.60
Chromium, Dissolved	10	100	<2.3	<2.3	<2.3	<2.3	NA	NA	*62.6*
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	***121***
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	78
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	43
Lead, Dissolved	1.5	15	<2.4	<0.22	<2.4	<0.22	NA	NA	<3.0
Selenium, Dissolved	10	50	<9.2	NA	<9.2	NA	NA	NA	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	<2.5	<2.5	NA	NA	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	<0.044	<0.044	NA	NA	<0.10
PAHs (ug/l)									
Acenaphthene	---	---	<0.35	<0.35	NA	NA	NA	NA	0.013J
Acenaphthylene	---	---	<0.36	<0.36	NA	NA	NA	NA	0.015J
Anthracene	600	3000	<0.29	<0.29	NA	NA	NA	NA	0.038J
Benzo(a)anthracene	---	---	<0.30	<0.30	NA	NA	NA	NA	0.17
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	NA	NA	NA	NA	***0.22***
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	NA	NA	NA	NA	***0.42***
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	NA	NA	NA	NA	0.23
Benzo(k)fluoranthene	---	---	<0.46	<0.46	NA	NA	NA	NA	0.14
Chrysene	0.02	0.2	<0.34	<0.34	NA	NA	NA	NA	***0.34***
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	NA	NA	NA	NA	0.041J
Fluoranthrene	80	400	<0.25	<0.25	NA	NA	NA	NA	0.57
Fluorene	80	400	<0.30	<0.30	NA	NA	NA	NA	0.017J
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	NA	NA	NA	NA	0.17
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	0.010J
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	0.015J
Naphthalene	10	100	<0.25	<0.25	NA	NA	NA	NA	0.026J
Phenanthrene	---	---	<0.20	<0.20	NA	NA	NA	NA	0.30
Pyrene	50	250	<0.29	<0.29	NA	NA	NA	NA	0.43

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-8								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	***33***	***98***	***42***	<16	***30***	***12***	***78***	***89***	***40.2***
n-Butylbenzene	---	---	<3.3	<12	26	<44	<11	<0.23	<0.23	<44	22.5
sec-Butylbenzene	---	---	<3.3	<14	<28	<12	<11	2.1	<5.5	<11	<43.7
tert-Butylbenzene	---	---	<3.3	<15	<30	<14	<9.8	2.8	<4.9	<11	6.0J
Chlorobenzene	---	---	<3.3	<15	<31	<18	<13	<0.26	<6.5	<16	<10.0
Chloroethane	80	400	<3.3	<23	<46	<15	<43	<0.86	<21	<21	<7.5
Chloroform	0.6	6	<16	<27	<54	<23	<72	<0.33	<8.2	<43	<50.0
Chloromethane	3	30	<3.3	<32	<65	<27	<16	<0.25	<6.3	<16	<10.0
1,1-Dichloroethane	85	850	<3.3	<16	<32	<20	<16	<0.54	<7.8	<16	<4.8
1,2-Dichloroethane	0.5	5	<3.3	<17	<34	<16	<14	<0.27	<6.8	<14	<3.4
1,1-Dichloroethene	0.7	7	<3.3	<22	<44	<17	<25	<0.50	<12	<25	<8.2
cis-1,2,-Dichloroethene	7	70	<3.3	<22	<44	<22	<19	<0.38	<9.5	<19	<5.1
trans-1,2-Dichloroethene	20	100	<3.3	<16	<33	<22	<15	<0.30	<7.5	<15	<5.1
1,2-Dichloropropane	0.5	5	<3.3	<27	<54	<16	<26	<0.52	<13	<26	<4.7
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<10.0
Ethylbenzene	140	700	<3.3	*230*	<26	<13	36	<0.22	6.7	*250*	*328*
Isopropylbenzene	---	---	<3.3	28	<29	<14	<9.4	<0.19	<4.7	16	36.0
p-Isopropyltoluene	---	---	17	51	41	52	42	<0.21	90	130	29.7
Methylene Chloride	0.5	5	<16	<19	<38	<19	<15	<0.30	<7.4	<15	<4.7
Naphthalene	10	100	*62*	***180***	*97*	*75*	***210***	*39*	***250***	***330***	***205***
n-Propylbenzene	---	---	28	<15	56	<15	<11	<0.22	<5.5	<11	22.2
Styrene	10	100	<3.3	<13	<27	<13	<19	<0.38	<9.5	<19	<10.0
Tetrachloroethene	0.5	5	<3.3	<21	<43	<21	<15	<0.29	<7.3	<15	<10.0
Toluene	160	800	100	**1,500**	*190*	<16	40	24	*310*	*250*	16.0J
1,1,1-Trichloroethane	40	200	<3.3	<19	<38	<19	<14	<0.26	<6.8	<14	<10.0
1,1,2-Trichloroethane	0.5	5	<3.3	<20	<40	<20	<22	<0.27	<11	<22	<3.9
Trichloroethene	0.5	5	<3.3	<13	<26	<13	<18	<0.45	<9.2	<18	<6.6
1,2,4-Trimethylbenzene	---	---	820	2,400	1,200	1,400	1,300	890	1,600	2,300	1,720
1,3,5-Trimethylbenzene	---	--	770	1,100	640	860	590	610	800	1,100	910
Trimethylbenzenes	96	480	***1,590***	***3,500***	***1,840***	***2,260***	***1,890***	***1,500***	***2,400***	***3,400***	***2,630***
Vinyl chloride	0.02	0.2	<3.3	***1.0***	<31	<15	<14	<0.27	<6.8	<13	<3.5
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	5,770
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	419
Total Xylene	400	2000	***3,300***	***12,900***	***6,600***	***8,000***	***7,900***	*1,200*	***8,600***	***12,000***	***6,189***

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-8								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	***760***	***890***	***42***	***3,000***	***1,900***	***880***	***6,600****	***1,400***	***3,930***
Barium, Dissolved	400	2000	20	17	90	150	120	110	260	81	127
Cadmium, Dissolved	0.5	5	<0.70	<0.70	<0.70	<0.70	<0.70	*0.8*	*3.7**	*0.89*	***19.9***
Chromium, Dissolved	10	100	***36,000***	*20*	*80*	*20*	*41*	***6,400***	***1,300****	*33*	*48.0*
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	*57.1*
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<39
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	57J
Lead, Dissolved	1.5	15	<2.4	<0.22	<2.4	<2.4	<2.4	<2.4	***110****	*6*	*4.9J*
Selenium, Dissolved	10	50	<9.2	NA	<9.2	<9.2	<9.2	<9.2	<6.5	*37*	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<3.2	<3.2	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	<0.044	<0.004	<0.044	0.07	*0.26*	<0.044	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	2.6	4.7	7.6	3.5	8.8	14	39	4.2	11.0
Acenaphthylene	---	---	3.3	5.9	12	6.7	12	16	26	3.9	0.54J
Anthracene	600	3000	<0.29	0.35	0.59	0.39	0.55	0.81	2.0	0.3	7.9
Benzo(a)anthracene	---	---	0.99	2.0	0.97	0.91	4.6	6.3	54	3.8	1.6
Benzo(a)pyrene	0.02	0.2	***0.37***	***0.95***	***0.31***	***0.29***	***2.3***	***2.6***	***27***	***2.2***	***0.63J***
Benzo(b)fluoranthene	0.02	0.2	***0.4***	***1.2***	***0.43***	***0.37***	***2.6***	***3.5***	***24***	***2.5***	***0.95J***
Benzo(g,h,i)perylene	---	---	<0.28	0.4	<0.28	<0.28	1.0	1.1	11	1	0.39J
Benzo(k)fluoranthene	---	---	<0.46	<0.46	<0.46	<0.46	1.2	1.4	15	1.2	0.55J
Chrysene	0.02	0.2	***0.67***	***1.4***	***0.87***	***0.55***	***2.9***	***4.3***	***28***	***2.7***	***1.7***
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	<0.29	<0.29	<0.35	0.37	4	0.36	0.52J
Fluoranthrene	80	400	6.4	9.9	11	7	25	37	*140*	19	13.4
Fluorene	80	400	3.0	7.2	15	8.4	15	21	38	5.5	14.7
Indeno(1,2,3-cd)pyrene	---	---	<0.35	0.43	<0.35	<0.35	0.98	1.1	11	1.2	0.49J
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	25.5
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	24.4
Naphthalene	10	100	*13*	***130***	***160***	***110***	***130***	*81*	***240***	*46*	***169***
Phenanthrene	---	---	2.4	29	43	19	68	69	190	27	50.4
Pyrene	50	250	5.1	7.1	7.5	5.3	18	23	*130*	12	12.0

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-9								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
VOCs (ug/l)											
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	<0.33	<0.31	<0.31	<0.31	NA	NA	NA	<0.29	***5.1***
n-Butylbenzene	---	---	<0.33	<0.24	<0.24	<0.24	NA	NA	NA	<0.23	<0.50
sec-Butylbenzene	---	---	<0.33	<0.28	<0.28	<0.28	NA	NA	NA	<0.22	<2.2
tert-Butylbenzene	---	---	<0.33	<0.30	<0.30	<0.30	NA	NA	NA	0.38	0.33J
Chlorobenzene	---	---	<0.33	<0.31	<0.31	<0.31	NA	NA	NA	<0.26	<0.50
Chloroethane	80	400	<0.33	<0.46	<0.46	<0.46	NA	NA	NA	<0.86	<0.37
Chloroform	0.6	6	<1.6	<0.54	<0.54	<0.54	NA	NA	NA	<1.4	<2.5
Chloromethane	3	30	<0.33	<0.65	<0.65	<0.65	NA	NA	NA	<0.33	<0.50
1,1-Dichloroethane	85	850	<0.33	<0.34	<0.34	<0.34	NA	NA	NA	<0.31	<0.24
1,2-Dichloroethane	0.5	5	<0.33	<0.34	<0.34	<0.34	NA	NA	NA	<0.27	<0.17
1,1-Dichloroethene	0.7	7	<0.33	<0.44	<0.44	<0.44	NA	NA	NA	<0.50	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	<0.44	<0.44	<0.44	NA	NA	NA	<0.38	0.31J
trans-1,2-Dichloroethene	20	100	<0.33	<0.33	<0.33	<0.33	NA	NA	NA	<0.30	<0.26
1,2-Dichloropropane	0.5	5	<0.33	<0.54	<0.54	<0.54	NA	NA	NA	<0.52	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.50
Ethylbenzene	140	700	<0.33	<0.26	<0.26	<0.26	NA	NA	NA	<0.22	<0.50
Isopropylbenzene	---	---	<0.33	<0.29	<0.29	<0.29	NA	NA	NA	<0.19	0.24J
p-Isopropyltoluene	---	---	<0.33	<0.29	<0.29	<0.29	NA	NA	NA	<0.21	<0.50
Methylene Chloride	0.5	5	<1.6	<0.38	<0.38	<0.38	NA	NA	NA	<0.30	<0.23
Naphthalene	10	100	<1.6	<0.27	<0.27	<0.27	NA	NA	NA	<0.17	<2.5
n-Propylbenzene	---	---	<0.33	<0.31	<0.31	<0.31	NA	NA	NA	<0.22	<0.50
Styrene	10	100	<0.33	<0.27	<0.27	<0.27	NA	NA	NA	<0.38	<0.50
Tetrachloroethene	0.5	5	<0.33	<0.43	<0.43	<0.43	NA	NA	NA	<0.29	<0.50
Toluene	160	800	<1.6	<0.32	<0.32	<0.32	NA	NA	NA	<0.27	<0.50
1,1,1-Trichloroethane	40	200	<0.33	<0.38	<0.38	<0.38	NA	NA	NA	<0.27	<0.50
1,1,2-Trichloroethane	0.5	5	<0.33	<0.40	<0.40	<0.40	NA	NA	NA	<0.45	<0.20
Trichloroethene	0.5	5	<0.33	<0.26	<0.26	<0.26	NA	NA	NA	<0.37	<0.33
1,2,4-Trimethylbenzene	---	---	0.36	0.32	0.32	<0.25	NA	NA	NA	0.34	<0.50
1,3,5-Trimethylbenzene	---	--	<0.33	<0.25	<0.25	<0.25	NA	NA	NA	<0.20	<0.50
Trimethylbenzenes	96	480	0.36	0.32	0.32	<0.25	NA	NA	NA	0.34	<0.50
Vinyl chloride	0.02	0.2	<0.33	<0.31	<0.31	<0.31	NA	NA	NA	<0.27	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
o-Xylene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.50
Total Xylene	400	2000	0.70	<0.52	<0.52	<0.52	NA	NA	NA	<0.86	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-9								
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	12/18/2007	4/15/2008	8/27/2008	1/21/2009	12/21/2015
RCRA Metals (ug/l)											
Arsenic, Dissolved	1	10	***71***	***28***	***760***	***56***	***130***	<7.9	***470****	***28***	***112***
Barium, Dissolved	400	2000	390	120	170	94	120	110	360	130	39.8
Cadmium, Dissolved	0.5	5	<0.70	<0.70	<0.70	<0.70	<5	0.9	***5.5****	*1.4*	<0.60
Chromium, Dissolved	10	100	***760***	<2.3	<2.3	<2.3	<10	<2.3	***130****	3	*37.8*
Chromium, Total	10	100	NA	NA	NA	NA	NA	NA	NA	NA	*53.3*
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	38
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	NA	NA	NA	15J
Lead, Dissolved	1.5	15	<2.4	<0.22	<2.4	<2.4	<5	<2.4	***190****	*12*	*3.6J*
Selenium, Dissolved	10	50	<9.2	NA	<9.2	<9.2	<20	<9.2	<6.5	*65*	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<3.2	<3.2	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	<0.044	<0.044	*0.24*	<0.044	*1.0*	<0.044	<0.10
PAHs (ug/l)											
Acenaphthene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	NA	<0.0048
Acenaphthylene	---	---	<0.36	<0.36	NA	NA	NA	NA	NA	NA	<0.0048
Anthracene	600	3000	<0.29	<0.29	NA	NA	NA	NA	NA	NA	0.0058J
Benzo(a)anthracene	---	---	<0.30	<0.30	NA	NA	NA	NA	NA	NA	<0.0049
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0042
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	NA	NA	NA	NA	NA	NA	<0.0051
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	NA	NA	NA	NA	NA	NA	<0.0034
Benzo(k)fluoranthene	---	---	<0.46	<0.46	NA	NA	NA	NA	NA	NA	<0.0054
Chrysene	0.02	0.2	<0.34	<0.34	NA	NA	NA	NA	NA	NA	<0.0041
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0053
Fluoranthrene	80	400	<0.25	<0.25	NA	NA	NA	NA	NA	NA	<0.0090
Fluorene	80	400	<0.30	<0.30	NA	NA	NA	NA	NA	NA	0.0052J
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	NA	NA	NA	NA	NA	NA	<0.0034
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.0030
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	NA	NA	NA	<0.0026
Naphthalene	10	100	<0.25	<0.25	NA	NA	NA	NA	NA	NA	0.0080J
Phenanthrene	---	---	<0.20	<0.20	NA	NA	NA	NA	NA	NA	<0.0074
Pyrene	50	250	<0.29	<0.29	NA	NA	NA	NA	NA	NA	<0.0074

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-10						MW-11		MW-12	
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	8/27/2008	12/21/2015	11/9/2010	12/21/2015	11/9/2010	12/21/2015
VOCs (ug/l)												
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	<0.33	<0.31	<0.31	<0.31	*0.57*	<0.50	*0.56*	<0.50	<0.23	<0.50
n-Butylbenzene	---	---	<0.33	<0.24	<0.24	<0.24	<0.23	<0.50	<0.31	<0.50	6.4	<0.50
sec-Butylbenzene	---	---	<0.33	<0.28	<0.28	<0.28	<0.22	<2.2	<0.22	<2.2	8.8	<2.2
tert-Butylbenzene	---	---	<0.33	<0.30	<0.30	<0.30	<0.20	<0.18	<0.20	<0.18	3.1	<0.18
Chlorobenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.26	<0.50	<0.30	<0.50	<0.30	<0.50
Chloroethane	80	400	<0.33	<0.46	<0.46	<0.46	<0.86	<0.37	<0.87	<0.37	<0.87	<0.37
Chloroform	0.6	6	<1.6	<0.54	<0.54	<0.54	<0.33	<2.5	<0.27	<2.5	<0.27	<2.5
Chloromethane	3	30	<0.33	<0.65	<0.65	<0.65	<0.25	<0.50	<0.76	<0.50	<0.76	<0.50
1,1-Dichloroethane	85	850	<0.33	<0.34	<0.34	<0.34	<0.31	<0.24	<0.32	<0.24	<0.32	<0.24
1,2-Dichloroethane	0.5	5	<0.33	<0.34	<0.34	<0.34	<0.27	<0.17	<0.25	<0.17	<0.25	<0.17
1,1-Dichloroethene	0.7	7	<0.33	<0.44	<0.44	<0.44	<0.50	<0.41	<0.41	<0.41	<0.41	<0.41
cis-1,2,-Dichloroethene	7	70	<0.33	<0.44	<0.44	<0.44	<0.38	<0.26	<0.34	<0.26	<0.34	<0.26
trans-1,2-Dichloroethene	20	100	<0.33	<0.33	<0.33	<0.33	<0.30	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	0.5	5	<0.33	<0.54	<0.54	<0.54	<0.52	<0.23	<0.39	<0.23	<0.39	<0.23
Diisopropyl ether	---	---	NA	NA	NA	NA	NA	<0.50	NA	<0.50	NA	<0.50
Ethylbenzene	140	700	0.42	49	3.6	<0.26	0.36	<0.50	0.41	<0.50	***3,300***	<0.50
Isopropylbenzene	---	---	<0.33	0.75	0.75	0.75	1.4	<0.14	<0.20	<0.14	310	<0.14
p-Isopropyltoluene	---	---	<0.33	<0.29	<0.29	<0.29	<0.21	<0.50	<0.31	<0.50	54	<0.50
Methylene Chloride	0.5	5	<1.6	<0.38	<0.38	<0.38	<0.30	<0.23	<0.91	<0.23	<0.91	<0.23
Naphthalene	10	100	<1.6	1.3	1.0	<0.27	2.4	<2.5	<0.98	<2.5	*12*	<2.5
n-Propylbenzene	---	---	<0.33	<0.31	<0.31	<0.31	<0.22	<0.50	<0.31	<0.50	110	<0.50
Styrene	10	100	<0.33	<0.27	<0.27	<0.27	<0.38	<0.50	<0.24	<0.50	<0.24	<0.50
Tetrachloroethene	0.5	5	<0.33	<0.43	<0.43	<0.43	<0.29	<0.50	<0.32	<0.50	<0.32	<0.50
Toluene	160	800	<1.6	<0.32	<0.32	<0.32	0.35	<0.50	<0.32	<0.50	0.33	<0.50
1,1,1-Trichloroethane	40	200	<0.33	<0.38	<0.38	<0.38	<0.27	<0.50	<0.31	<0.50	<0.31	<0.50
1,1,2-Trichloroethane	0.5	5	<0.33	<0.40	<0.40	<0.40	<0.45	<0.20	<0.29	<0.20	<0.29	<0.20
Trichloroethene	0.5	5	<0.33	<0.26	<0.26	<0.26	<0.37	<0.33	<0.31	<0.33	<0.31	<0.33
1,2,4-Trimethylbenzene	---	---	1.3	0.49	<0.25	<0.25	1.2	<0.50	<0.18	<0.50	160	<0.50
1,3,5-Trimethylbenzene	---	--	0.62	<0.25	<0.25	<0.25	<0.2	<0.50	<0.33	<0.50	80	<0.50
Trimethylbenzenes	96	480	1.92	0.49	<0.25	<0.25	1.2	<0.50	<0.33	<0.50	*240*	<0.50
Vinyl chloride	0.02	0.2	<0.33	<0.31	<0.31	<0.31	<0.27	<0.18	<0.34	<0.18	<0.34	<0.18
m&p Xylene	---	---	NA	NA	NA	NA	NA	<1.0	NA	<1.0	NA	<1.0
o-Xylene	---	---	NA	NA	NA	NA	NA	<0.50	NA	<0.50	NA	<0.50
Total Xylene	400	2000	270	9.66	11	<0.52	<0.86	<1.0	3.4	<1.0	***11,000***	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-10						MW-11		MW-12	
Date Collected			10/16/2006	2/21/2007	5/22/2007	8/8/2007	8/27/2008	12/21/2015	11/9/2010	12/21/2015	11/9/2010	12/21/2015
RCRA Metals (ug/l)												
Arsenic, Dissolved	1	10	<7.9	<7.9	NA	NA	NA	***229***	*7.4*	***36.6***	<6.5	<7.2
Barium, Dissolved	400	2000	240	67	NA	NA	NA	120	100	98.6	280	*439*
Cadmium, Dissolved	0.5	5	<0.70	<0.70	NA	NA	NA	*1.0J*	<0.80	<0.60	<0.80	<0.60
Chromium, Dissolved	10	100	*27*	<2.3	NA	NA	NA	2.8J	<1.7	3.6J	<1.7	<2.1
Chromium, Total	10	100	NA	NA	NA	NA	NA	***854***	NA	*65.6*	NA	1.9J
Hexavalent Chromium, Total	---	---	NA	NA	NA	NA	NA	<97	<2.5	<3.9	<2.5	<39
Trivalent Chromium, Total	---	---	NA	NA	NA	NA	NA	850	180	66	17	<39
Lead, Dissolved	1.5	15	<2.4	<0.22	NA	NA	NA	<3.0	<9.0	<3.0	<9.0	*4.1J*
Selenium, Dissolved	10	50	<9.2	NA	NA	NA	NA	<6.7	<6.3	<6.7	<6.3	<6.7
Silver, Dissolved	10	50	<2.5	<2.5	NA	NA	NA	<2.7	<3.3	<2.7	<3.3	<2.7
Mercury, Dissolved	0.2	2	<0.044	<0.044	NA	NA	NA	<0.10	<0.017	<0.10	<0.017	<0.10
PAHs (ug/l)												
Acenaphthene	---	---	0.61	0.43	NA	NA	NA	0.26	0.01	<0.0047	0.28	<0.0061
Acenaphthylene	---	---	3.0	1.7	NA	NA	NA	0.070	<0.014	<0.0047	0.73	<0.0061
Anthracene	600	3000	<0.29	<0.29	NA	NA	NA	0.38	<0.0095	<0.0038	0.024	0.0053J
Benzo(a)anthracene	---	---	<0.30	<0.30	NA	NA	NA	0.93	0.073	<0.0048	0.46	<0.0063
Benzo(a)pyrene	0.02	0.2	<0.29	<0.29	NA	NA	NA	***0.88***	*0.064*	<0.0042	***0.44***	0.0076J
Benzo(b)fluoranthene	0.02	0.2	<0.36	<0.36	NA	NA	NA	***1.1***	*0.096*	<0.0050	***0.54***	0.0089J
Benzo(g,h,i)perylene	---	---	<0.28	<0.28	NA	NA	NA	0.51	0.075	<0.0033	0.32	0.011J
Benzo(k)fluoranthene	---	---	<0.46	<0.46	NA	NA	NA	0.49	<0.0046	<0.0053	0.22	<0.0070
Chrysene	0.02	0.2	<0.34	<0.34	NA	NA	NA	***1.1***	*0.049*	<0.0040	***0.31***	<0.0052
Dibenzo(a,h)anthracene	---	---	<0.29	<0.29	NA	NA	NA	0.11	0.094	<0.0052	0.19	<0.0069
Fluoranthrene	80	400	0.48	0.45	NA	NA	NA	2.3	0.09	<0.0089	0.97	<0.012
Fluorene	80	400	1.6	1.2	NA	NA	NA	0.23	<0.0048	<0.0038	0.44	<0.0050
Indeno(1,2,3-cd)pyrene	---	---	<0.35	<0.35	NA	NA	NA	0.43	0.051	<0.0034	0.28	0.010J
1-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	0.036J	NA	<0.0029	NA	<0.0038
2-Methyl Naphthalene	---	---	NA	NA	NA	NA	NA	0.024J	NA	<0.0026	NA	<0.0034
Naphthalene	10	100	<0.25	0.94	NA	NA	NA	0.056	0.033	<0.0043	7.8	0.0069J
Phenanthrene	---	---	0.43	2.4	NA	NA	NA	1.2	0.063	<0.0072	1.2	<0.0095
Pyrene	50	250	0.32	0.29	NA	NA	NA	1.8	0.065	<0.0073	0.74	<0.0095

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-13		MW-14	MW-14R	MW-15		MW-16		MW-17	MW-18	MW-19	PZ-1	
Date Collected			11/9/2010	12/21/2015	11/9/2010	12/21/2015	11/9/2010	12/21/2015	11/9/2010	12/21/2015	12/21/2015	12/21/2015	12/21/2015	11/3/2016	11/14/2016
VOCs (ug/l)															
Acetone	1800	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	5	*0.97*	*3.4*	<0.23	<0.50	<0.23	<0.50	<0.23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
n-Butylbenzene	---	---	<0.31	<0.50	<0.31	<0.50	<0.31	<0.50	<0.31	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene	---	---	0.34	<2.2	<0.22	<2.2	<0.22	<2.2	<0.22	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene	---	---	0.56	0.23J	<0.20	<0.18	<0.20	<0.18	<0.20	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Chlorobenzene	---	---	<0.30	<0.50	<0.30	<0.50	<0.30	<0.50	<0.30	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	80	400	<0.87	<0.37	<0.87	<0.37	<0.87	<0.37	<0.87	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Chloroform	0.6	6	<0.27	<2.5	<0.27	<2.5	<0.27	<2.5	<0.27	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloromethane	3	30	<0.76	<0.50	<0.76	<0.50	<0.76	<0.50	<0.76	<0.50	<0.50	<0.50	<0.50	<0.50	1.6
1,1-Dichloroethane	85	850	<0.32	<0.24	<0.32	<0.24	<0.32	<0.24	<0.32	<0.24	1.5	<0.24	<0.24	0.60J	<0.24
1,2-Dichloroethane	0.5	5	<0.25	<0.17	<0.25	<0.17	<0.25	<0.17	<0.25	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	0.7	7	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
cis-1,2,-Dichloroethene	7	70	<0.34	<0.26	<0.34	<0.26	<0.34	<0.26	<0.34	<0.26	<0.26	<0.26	0.62J	2.8	1.1
trans-1,2-Dichloroethene	20	100	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	0.5	5	<0.39	<0.23	<0.39	<0.23	<0.39	<0.23	<0.39	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Diisopropyl ether	---	---	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	140	700	***1,100***	<0.50	1.1	<0.50	<0.22	<0.50	<0.22	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Isopropylbenzene	---	---	40	<0.14	0.68	<0.14	<0.20	<0.14	<0.20	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene	---	---	0.81	<0.50	3.7	0.53J	<0.31	<0.50	<0.31	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	0.5	5	<0.91	<0.23	<0.91	<0.23	<0.91	<0.23	<0.91	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Naphthalene	10	100	1.3	<2.5	<0.98	<2.5	<0.98	<2.5	<0.98	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
n-Propylbenzene	---	---	1.5	<0.50	<0.31	<0.50	<0.31	<0.50	<0.31	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	10	100	<0.24	<0.50	<0.24	<0.50	<0.24	<0.50	<0.24	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	0.5	5	<0.32	<0.50	<0.32	<0.50	<0.32	<0.50	<0.32	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	160	800	3.7	<0.50	<0.32	<0.50	<0.32	<0.50	<0.32	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	40	200	<0.31	<0.50	<0.31	<0.50	<0.31	<0.50	<0.31	<0.50	7.6	<0.50	0.61J	<0.50	<0.50
1,1,2-Trichloroethane	0.5	5	<0.29	<0.20	<0.29	<0.20	<0.29	<0.20	<0.29	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethene	0.5	5	<0.31	<0.33	<0.31	<0.33	<0.31	<0.33	<0.31	*<0.33*	*3.7*	3.0	***54.0***	***31.4***	***5.4***
1,2,4-Trimethylbenzene	---	---	56	<0.50	0.52	<0.50	<0.18	<0.50	<0.18	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3,5-Trimethylbenzene	---	--	4.3	<0.50	<0.33	<0.50	<0.33	<0.50	<0.33	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trimethylbenzenes	96	480	60.3	<0.50	0.52	<0.50	<0.33	<0.50	<0.33	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl chloride	0.02	0.2	<0.34	<0.18	<0.34	<0.18	<0.34	<0.18	<0.34	<0.18	<0.18	<0.18	<0.18	***0.33J***	***0.51J***
m&p Xylene	---	---	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
o-Xylene	---	---	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Xylene	400	2000	*4,600*	<1.0	5.1	<1.0	<0.86	<1.0	<0.86	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table 2. Groundwater Analytical Results
Former Wayne Pigment Corp, 300 Barclay Street and 139 East Oregon S

PARAMETERS	Preventive Action Limit	Enforcement Standard	MW-13		MW-14	MW-14R	MW-15		MW-16		MW-17	MW-18	MW-19	PZ-1	
Date Collected			11/9/2010	12/21/2015	11/9/2010	12/21/2015	11/9/2010	12/21/2015	11/9/2010	12/21/2015	12/21/2015	12/21/2015	12/21/2015	11/3/2016	11/14/2016
RCRA Metals (ug/l)															
Arsenic, Dissolved	1	10	**110**	***115***	***1,100***	***101***	<6.5	<7.2	*7*	<7.2	<7.2	*8.4J*	<7.2	<5.4	NA
Barium, Dissolved	400	2000	30	39.3	17	23.8	110	29.6	*460*	85.1	100	45.4	226	282	NA
Cadmium, Dissolved	0.5	5	<0.80	*0.71J*	<0.80	<1.0	<0.80	<0.60	<0.80	<0.60	<0.60	<0.60	*0.88J*	<1.3	NA
Chromium, Dissolved	10	100	5	*40.2*	***4,300***	***5,670***	3	***1,220***	<1.7	<2.1	<2.1	<2.1	<2.1	<2.5	NA
Chromium, Total	10	100	NA	***310***	NA	***4,270***	NA	***1,260***	NA	1.7J	NA	NA	NA	*29.5*	NA
Hexavalent Chromium, Total	---	---	<2.5	<3.9	3,600	<390	<0.25	790	44	<3.9	NA	NA	NA	<0.051	NA
Trivalent Chromium, Total	---	---	38	310	9,500	4300	57	470	<2.5	<3.9	NA	NA	NA	<0.051	NA
Lead, Dissolved	1.5	15	<9.0	*4.5J*	<1.8	*6.3J*	<9.0	*4.0J*	<18	*3.8J*	<3.0	<3.0	<3.0	<4.3	NA
Selenium, Dissolved	10	50	<6.3	<6.7	<6.3	9.1J	<6.3	<6.7	*10*	<6.7	*15.7J*	8.6J	<6.7	<5.6	NA
Silver, Dissolved	10	50	<3.3	<2.7	<3.3	<3.2	<3.3	<2.7	<3.3	<2.7	<2.7	<2.7	<2.7	<3.2	NA
Mercury, Dissolved	0.2	2	<0.017	<0.10	0.04	0.12J	<0.017	<0.10	<0.017	<0.10	<0.10	<0.10	<0.10	<0.13	NA
PAHs (ug/l)															
Acenaphthene	---	---	0.061	<0.0046	<0.0051	0.011J	0.01	<0.0047	0.012	0.040J	<0.0046	<0.0048	0.0076J	0.030J	<0.0058
Acenaphthylene	---	---	0.12	<0.0046	0.016	<0.0048	<0.014	<0.0047	0.014	<0.0057	<0.0045	<0.0048	<0.0045	0.0078J	<0.0048
Anthracene	600	3000	0.012	0.0071J	0.015	0.014J	<0.0095	0.0071J	<0.0095	0.029J	<0.0037	0.0043J	<0.0036	0.088	<0.010
Benzo(a)anthracene	---	---	0.15	<0.0048	0.056	0.0086J	0.03	<0.0048	0.038	0.017J	<0.0047	<0.0049	<0.0046	0.088	<0.0073
Benzo(a)pyrene	0.02	0.2	*0.091*	<0.0041	*0.028*	0.0052J	<0.0029	<0.0042	0.013	0.0055J	<0.0041	<0.0042	<0.0040	*0.059J*	<0.010
Benzo(b)fluoranthene	0.02	0.2	*0.11*	<0.0050	*0.038*	0.013J	<0.0067	0.0050J	*0.025*	0.0080J	0.0058J	<0.0051	<0.0048	*0.071*	<0.0055
Benzo(g,h,i)perylene	---	---	0.063	<0.0033	0.03	0.013J	<0.0052	<0.0033	0.01	<0.0040	<0.0032	<0.0034	<0.0032	0.058	<0.0065
Benzo(k)fluoranthene	---	---	0.053	<0.0053	<0.0046	<0.0055	<0.0046	<0.0053	<0.0046	<0.0065	<0.0052	<0.0054	<0.0051	0.022J	<0.0073
Chrysene	0.02	0.2	*0.099*	<0.0040	*0.026*	0.013J	<0.016	0.0045J	<0.016	0.0098J	<0.0039	<0.0041	<0.0038	*0.088*	<0.013
Dibenzo(a,h)anthracene	---	---	0.096	<0.0052	0.09	<0.0055	0.091	<0.0052	0.086	<0.0064	<0.0051	<0.0053	<0.0050	<0.012	<0.0096
Fluoranthrene	80	400	0.34	<0.0088	0.075	0.048J	0.03	<0.0089	0.035	0.062	<0.0086	<0.0090	<0.0085	0.21	0.015J
Fluorene	80	400	0.054	<0.0038	0.018	0.015J	<0.0048	<0.0038	<0.0048	0.020J	<0.0037	<0.0039	0.0053J	0.056	<0.0077
Indeno(1,2,3-cd)pyrene	---	---	0.047	<0.0033	0.022	0.0058J	<0.0054	<0.0034	<0.0054	<0.0041	0.0034J	<0.0034	<0.0032	0.032J	<0.017
1-Methyl Naphthalene	---	---	NA	<0.0029	NA	0.077	NA	<0.0029	NA	0.0068J	<0.0028	<0.0030	0.0052J	0.019J	<0.0057
2-Methyl Naphthalene	---	---	NA	<0.0026	NA	0.025J	NA	<0.0026	NA	0.0079J	<0.0025	<0.0026	0.0084J	0.023J	<0.0047
Naphthalene	10	100	0.84	0.0087J	0.033	0.0087J	<0.010	<0.0043	<0.010	0.016J	<0.0042	<0.0044	0.0047J	0.024J	<0.018
Phenanthrene	---	---	0.091	0.0076J	0.088	0.038J	0.034	<0.0072	0.039	0.13	<0.0070	<0.0074	0.0095J	0.27	0.016J
Pyrene	50	250	0.27	<0.0072	0.057	0.049J	0.022	<0.0073	<0.0055	0.058	<0.0071	<0.0074	<0.0069	0.17	0.017J

Notes:
Bold concentrations exceed NR 140 enforcement standards
Italicized concentrations exceed NR 140 preventive action limits
--- - not analyzed
* Total metal concentration, not field filtered
J - Results between the limit of detection and limit of quantitation
NA - not analyzed or not available
PAHs - polycyclic aromatic hydrocarbons
RCRA - resource conservation recovery act
ug/l - micrograms per liter
VOCs - volatile organic compounds

Table 3. Sub-Slab Vapor Analytical Results, Buildings 33 and 34
139 East Oregon Street, Milwaukee, Wisconsin

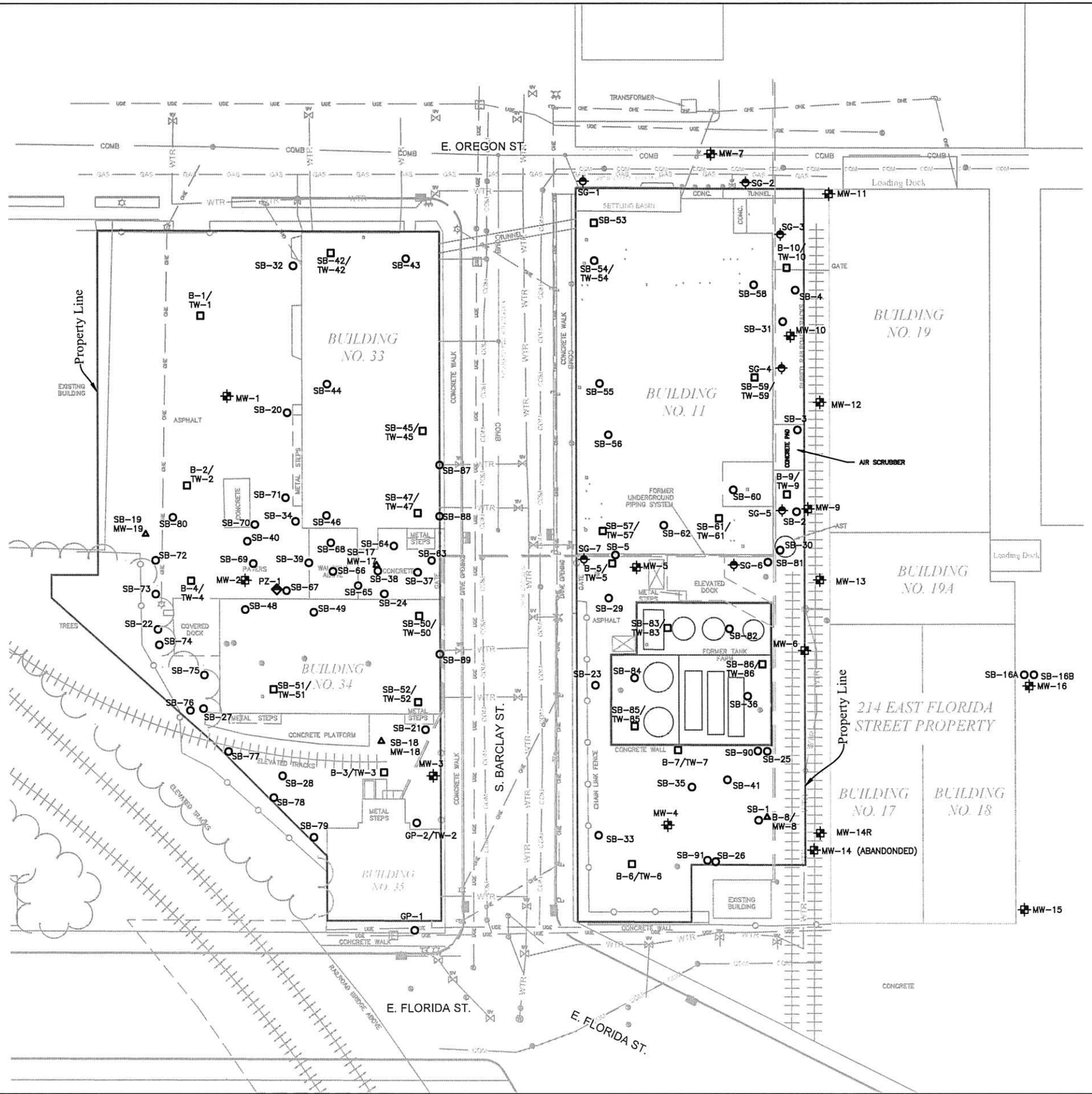
Sample Type - Ambient Air (AA)/Sub-Slab (SS)	Target Sub-Slab Vapor Risk Screening Levels	SS	SS	SS	SS	SS	SS	SS	DSG	DSG	DSG	DSG	DSG	DSG	DSG
Sample I.D.		**VP-1**	**VP-2**	**VP-3**	**VP-4**	**VP-5**	**VP-6**	**VP-7**	**SG-1**	**SG-2**	**SG-3**	**SG-4**	**SG-5**	**SG-6**	**SG-7**
Location in Building/Property		Building 33	Building 33	Building 33	Building 33	Building 34	Building 34	Building 34	Building 11	Building 11	Building 11	Building 11	Building 11	Building 11	Building 11
Tracer Gas - Present (P) Not Present (NP)		NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Laboratory		Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace
Duration of Sample Collection (hrs)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Date Collected		11/23/15	11/23/15	11/23/15	11/23/15	11/23/15	11/23/15	11/23/15	12/24/15	12/24/15	12/24/15	12/24/15	12/24/15	12/24/15	12/24/15
Parameter															
VOCs (ug/m^3) by EPA Method TO-15															
Acetone	1,066,667	35.3	18.4	22.3	20.9	75.7	574	88.4	17.5	9.6	18.4	<25.8	9.3	23.5	9.4
Benzene	120	1.8	4.3	2.0	2.2	2.2	4.8	4.2	**169**	1.6	0.60	<3.8	<0.25	<0.23	0.73
Benzyl Chloride	19	<0.28	<0.28	<0.28	<0.28	<0.28	<0.22	<0.28	<0.27	<0.28	<0.30	<5.1	<0.35	<0.31	<0.26
Bromodichloromethane	25	<0.33	<0.33	<0.33	<0.33	<0.33	<0.26	<0.33	<0.31	<0.33	<0.36	<6.0	<0.40	<0.36	<0.30
Bromoform	867	<1.5	<1.5	<1.5	<1.5	<1.5	<1.2	<1.5	<1.5	<1.5	<1.6	<27.9	<1.9	<1.7	<1.4
Bromomethane	173	<0.52	<0.52	<0.52	<0.52	<0.52	<0.42	<0.52	<0.50	<0.52	<0.57	<9.6	<0.64	<0.58	<0.48
1,3-Butadiene	31	<0.30	<0.30	<0.30	<0.30	<0.30	<0.24	<0.30	<0.28	<0.30	<0.32	<5.5	<0.37	<0.33	<0.27
2-Butanone (MEK)	173,333	2.3J	<0.38	<0.38	<0.38	<0.38	22.7	19.1	4.8J	<0.38	4.5J	<7.1	2.3J	12.2	1.4J
Carbon disulfide	24,333	14.4	0.65J	8.0	<0.17	1.30	8.0	1.8	17.8	3.9	0.74J	<3.1	1.3J	6.5	0.61J
Carbon tetrachloride	157	<0.32	<0.32	<0.32	<0.32	<0.32	<0.26	<0.32	<0.31	<0.32	<0.35	<6.0	<0.40	<0.36	<0.30
Chlorobenzene	1,733	<0.23	<0.23	<0.23	<0.23	<0.23	<0.18	<0.23	<0.22	<0.23	<0.25	<4.2	<0.28	<0.25	<0.21
Chloroethane	---	<0.33	<0.33	<0.33	<0.33	<0.33	<0.26	<0.33	<0.31	<0.33	<0.36	<6.0	<0.40	<0.36	<0.30
Chloroform	40	5.5	1.8	1.4	2.4	5.4	5.0	2.0	<0.31	<0.32	<0.35	<5.9	1.8	<0.35	<0.29
Chloromethane	3,133	<0.18	<0.18	<0.18	<0.18	<0.18	<0.14	<0.18	1.4	1.1	0.80	<3.3	0.47J	0.70J	1.1
Cyclohexane	210,000	4.8	8.4	2.8	6.4	68.7	81.0	9.5	18.0	3.0	1.2J	<9.8	1.1J	1.3J	1.5
Dibromochloromethane	33	<1.4	<1.4	<1.4	<1.4	<1.4	<1.1	<1.4	<1.4	<1.4	<1.6	<26.5	<1.8	<1.6	<1.3
1,2-Dibromoethane	2	<1.3	<1.3	<1.3	<1.3	<1.3	<1.0	<1.3	<1.2	<1.3	<1.4	<24.0	<1.6	<1.4	<1.2
1,2-Dichlorobenzene	7,000	<0.86	<0.86	<0.86	<0.86	<0.86	<0.69	<0.86	<0.82	<0.86	<0.94	<15.9	<1.1	<0.95	<0.79
1,3-Dichlorobenzene	---	<0.89	4.7	<0.89	<0.89	<0.89	<0.71	<0.89	<0.85	<0.89	<0.97	<16.4	<1.1	<0.99	8.3
1,4-Dichlorobenzene	87	<0.84	<0.84	<0.84	<0.84	<0.84	<0.67	<0.84	1.1J	<0.84	1.3J	<15.5	1.5J	1.3J	1.5J
Dichlorodifluoromethane	3,333	1.7J	2.1	2.5	1.6J	5.3	1.7	1.5J	2.7	2.8	2.4	<14.9	2.8	2.4	2.9
1,1-Dichloroethane	600	3.9	<0.26	<0.26	11.2	142	94.7	19.3	<0.25	<0.26	<0.29	<4.9	<0.33	<0.29	<0.24
1,2-Dichloroethane	37	<0.34	<0.34	3.7	33.2	**88.8**	**74.6**	22.8	<0.33	<0.34	0.38	<6.4	<0.43	<0.38	<0.32
1,1-Dichloroethene	7,000	<0.40	<0.40	<0.40	<0.40	<0.40	5.4	<0.40	<0.38	<0.40	<0.44	<7.4	<0.50	<0.44	<0.37
cis-1,2-Dichloroethene	---	<0.41	<0.41	<0.41	<0.41	1,030	893	10.5	<0.40	<0.41	<0.45	<7.6	<0.51	<0.46	<0.38
trans-1,2-Dichloroethene	---	<0.65	<0.65	<0.65	<0.65	7.5	8.7	<0.65	<0.62	<0.65	<0.70	<11.9	<0.80	<0.71	<0.60
1,2-Dichloropropane	93	<0.45	<0.45	<0.45	<0.45	<0.45	<0.36	<0.45	<0.43	<0.45	<0.49	<8.4	<0.56	<0.50	<0.42
cis-1,3-Dichloropropene	---	<0.62	<0.62	<0.62	<0.62	<0.62	<0.49	<0.62	<0.59	<0.62	<0.68	<11.4	<0.77	<0.69	<0.57
trans-1,3-Dichloropropene	---	<0.44	<0.44	<0.44	<0.44	<0.44	<0.35	<0.44	<0.42	<0.44	<0.48	<8.1	<0.54	<0.48	<0.40
Dichlorotetrafluoroethane	---	<0.52	<0.52	<0.52	<0.52	<0.52	<0.42	<0.52	<0.50	<0.52	<0.57	<9.6	<0.64	<0.58	<0.48
Ethanol	---	33.2	92.4	20.5	<0.45	66.6	119	6.8	6.5	7.0	7.8	<8.2	4.0	11.6	3.9
Ethyl acetate	2,433	2.5	<0.58	<0.58	<0.58	<0.58	<0.47	<0.58	<0.56	<0.58	<0.64	<10.8	<0.72	2.3	<0.54
Ethylbenzene	367	1.5	4.6	2.1	2.8	3.0	4.4	3.6	19.4	1.9	22.6	<13.2	5.0	2.3	2.5
4-Ethyltoluene	---	<0.32	1.0J	0.89J	<0.32	<0.32	0.95J	<0.32	1.5J	<0.32	<0.34	<5.8	<0.39	<0.35	<0.29
N-Heptane	---	3.0	9.6	3.9	7.7	4.3	7.0	8.2	14.3	5.6	0.92J	<8.6	<0.58	1.2J	1.4
Hexachloro-1,3-butadiene	---	<1.1	<1.1	<1.1	<1.1	<1.1	<0.87	<1.1	<1.0	<1.1	<1.2	<20.2	<1.4	<1.2	<1.0
n-Hexane	24,333	13.5	10.3	9.3	6.6	3.6	10.4	10.9	16.2	10.5	1.6	<11.1	<0.74	1.8	1.2
2-Hexanone	1,033	<0.69	<0.69	<0.69	<0.69	<0.69	<0.55	<0.69	<0.66	<0.69	<0.75	<12.7	<0.85	<0.76	<0.64
Methylene Chloride	21,000	220	<0.91	102	<0.91	<0.91	16.6	<0.91	<0.87	<0.91	<0.99	<16.8	1.5J	2.2J	1.7J
4-Methyl-2-pentanone (MIBK)	103,333	<0.36	<0.36	<0.36	<0.36	<0.36	11.6	<0.36	0.87J	<0.36	<0.40	<6.7	<0.45	6.0J	<0.34
Methyl-tert-butyl ether (MTBE)	3,667	<0.51	<0.51	<0.51	<0.51	<0.51	<0.41	<0.51	<0.49	<0.51	<0.55	<9.4	<0.63	<0.56	<0.47
Naphthalene	28	10.5	<0.51	<0.51	<0.51	<0.51	<0.41	<0.51	5.4	<0.51	<0.56	<9.5	<0.63	5.2	<0.47
2-Propanol	---	3.1J	15.3	<0.40	<0.40	55.3	243	32.8	<0.39	<0.40	<0.44	<7.4	<0.50	<0.45	23.9

Table 3. Sub-Slab Vapor Analytical Results, Buildings 33 and 34
139 East Oregon Street, Milwaukee, Wisconsin

Sample Type - Ambient Air (AA)/Sub-Slab (SS)	Target Sub-Slab Vapor Risk Screening Levels	SS	SS	SS	SS	SS	SS	SS	DSG	DSG	DSG	DSG	DSG	DSG	DSG
Sample I.D.		**VP-1**	**VP-2**	**VP-3**	**VP-4**	**VP-5**	**VP-6**	**VP-7**	**SG-1**	**SG-2**	**SG-3**	**SG-4**	**SG-5**	**SG-6**	**SG-7**
Location in Building/Property		Building 33	Building 33	Building 33	Building 33	Building 34	Building 34	Building 34	Building 11	Building 11	Building 11	Building 11	Building 11	Building 11	Building 11
Tracer Gas - Present (P) Not Present (NP)		NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Laboratory		Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace	Pace
Duration of Sample Collection (hrs)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Date Collected		11/23/15	11/23/15	11/23/15	11/23/15	11/23/15	11/23/15	11/23/15	12/24/15	12/24/15	12/24/15	12/24/15	12/24/15	12/24/15	12/24/15
Parameter															
VOCs (ug/m^3) by EPA Method TO-15															
Propene	103,333	9.2	21.1	5.4	7.3	3.4	15.5	16.3	49.1	10.9	3.6	<4.2	<0.28	<0.25	<0.21
Styrene	33,333	<0.32	<0.32	<0.32	<0.32	<0.32	<0.26	<0.32	<0.31	<0.32	<0.35	<6.0	<0.40	<0.36	<0.30
1,1,2,2-Tetrachloroethane	16	<0.55	<0.55	<0.55	<0.55	<0.55	<0.44	<0.55	<0.53	<0.55	<0.60	<10.2	<0.68	<0.61	<0.51
Tetrachloroethylene	1,400	2.6	1.9	3.3	4.9	5.6	4.7	15.9	1.0J	<0.47	0.75J	**9400**	5.5	<0.52	<0.43
Tetrahydrofuran	---	<0.20	<0.20	<0.20	<0.20	<0.20	<0.16	<0.20	<0.19	<0.20	<0.22	<3.7	2.2	31.8	<0.18
Toluene	173,333	4.4	8.1	4.3	5.4	4.3	30.8	7.0	25.0	15.5	3.7	6.1J	3.3	6.9	6.8
1,2,4-Trichlorobenzene	70	<1.5	<1.5	<1.5	<1.5	<1.5	<1.2	<1.5	<1.5	<1.5	<1.7	<28.2	<1.9	<1.7	<1.4
1,1,1-Trichloroethane	173,333	181	17.5	57.3	1100	5800	4740	878	<0.40	<0.41	<0.45	<7.7	<0.51	<0.46	<0.38
1,1,2-Trichloroethane	60	<0.41	<0.41	<0.41	<0.41	<0.41	<0.33	<0.41	<0.40	<0.41	<0.45	<7.6	<0.51	<0.46	<0.38
Trichloroethylene	70	**171**	3.6	9.2	**219**	**26,200**	**41,600**	**3,950**	0.61J	<0.46	<0.51	<8.6	<0.57	<0.51	1.0
Trichlorofluoromethane	24,333	2.2	1.5J	2.3	1.7J	1.2J	1.2J	0.98J	1.3J	1.6J	1.5J	<4.1	6.0	2.1J	1.5J
1,1,2-Trichlorotrifluoroethane	---	<0.51	<0.51	<0.51	<0.51	<0.51	<0.40	<0.51	0.48	<0.51	<0.55	<9.3	<0.63	<0.56	<0.47
1,2,4-Trimethylbenzene	243	1.5J	1.6J	1.6J	<0.21	<0.21	2.0	1.4J	3.5	2.5	<0.23	<3.9	1.2J	1.6J	1.2J
1,3,5-Trimethylbenzene	---	<0.31	1.2J	1.2J	<0.31	<0.31	1.1J	<0.31	1.7	0.89J	<0.33	<5.7	<0.38	<0.34	<0.28
Vinyl Acetate	7,000	<0.55	<0.55	<0.55	<0.55	<0.55	<0.44	<0.55	<0.53	<0.55	1.6	<10.2	<0.69	<0.61	<0.51
Vinyl Chloride	57	<0.33	<0.33	<0.33	<0.33	<0.33	<0.26	<0.33	<0.31	<0.33	<0.36	<6.0	<0.41	<0.36	<0.30
m&p-Xylene	3,333	3.5	7.5	4.5	3.8	2.8J	11.2	6.6	72.3	7.2	84.4	<24.4	21.8	9.6	7.3
o-Xylene	3,333	1.4J	2.5	1.9	1.4J	0.88J	3.6	2.7	34.8	2.7	30.4	<10.9	9.6	3.5	2.3

Bold values exceed target levels
Vapor Action Levels based on USEPA Regional Screening Levels (RSLs), November 2014
ug/m3 = Micrograms per cubic meter
- - no target subslab vapor or indoor air standard
Sub-Slab and near-slab samples colleced using the helium shroud and shut-in test method
Helium meter used to detect tracer gas during sub-slab aqnd near-slab sample collection procedure
All vapor samples collected into 6 liter Summa canisters

Figures



LEGEND

- SOIL PROBE LOCATION
- TEMPORARY WELL / SOIL BORING
- MONITORING WELL / SOIL BORING
- PIEZOMETER LOCATION
- DEEP SOIL GAS LOCATION
- MONITORING WELL LOCATION

SCALE IN FEET

50' 0 50'

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE	11/9/16
DRAWN BY	RJN	DATE	11/9/16
APPROVED BY	KWW	DATE	11/9/16
CADFILE	C:\Users\rnewell.SETENV\appdata\local\temp\AcPublish_1112\BASE FILE.dwg		
XREF			
LMAN			

FIGURE 1
SITE LAYOUT MAP
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

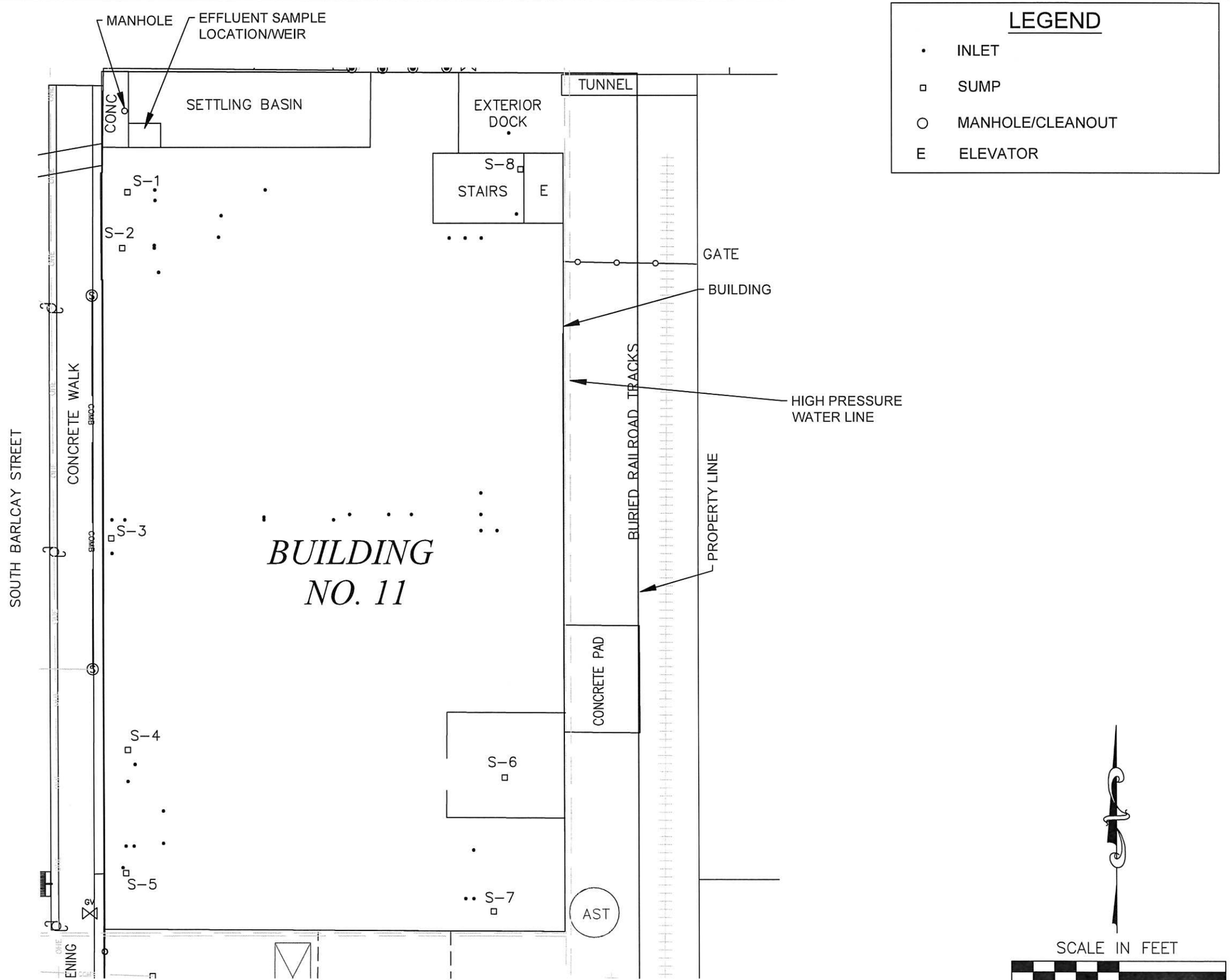
KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019

SCALE 1" = 50'

SHEET NUMBER

Nov 16, 2016 - 3:53pm C:\Users\rnewell.SETENV\appdata\local\temp\AcPublish_1112\BASE FILE.dwg



LEGEND

- INLET
- SUMP
- MANHOLE/CLEANOUT
- E ELEVATOR

REVISION NO.	DESCRIPTION	DATE	BY

DESIGNED BY	TLS	DATE 4/11/17
DRAWN BY	RJN	DATE 4/11/17
APPROVED BY	KWW	DATE 4/11/17

CADFILE G:\ACAD\2505019 – 300 S Barclay st\2017-4-5\BASE FILE.dwg
XREF
LMAN

FIGURE 2
BUILDING 11 SUMPS
WAYNE PIGMENT CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
735 NORTH WATER STREET, SUITE 510
MILWAUKEE, WI 53202
414.224.8300 (tel) - 414.224.8383 (fax)

KEY PROJECT NUMBER 2505019
SCALE 1" = 20'
SHEET NUMBER

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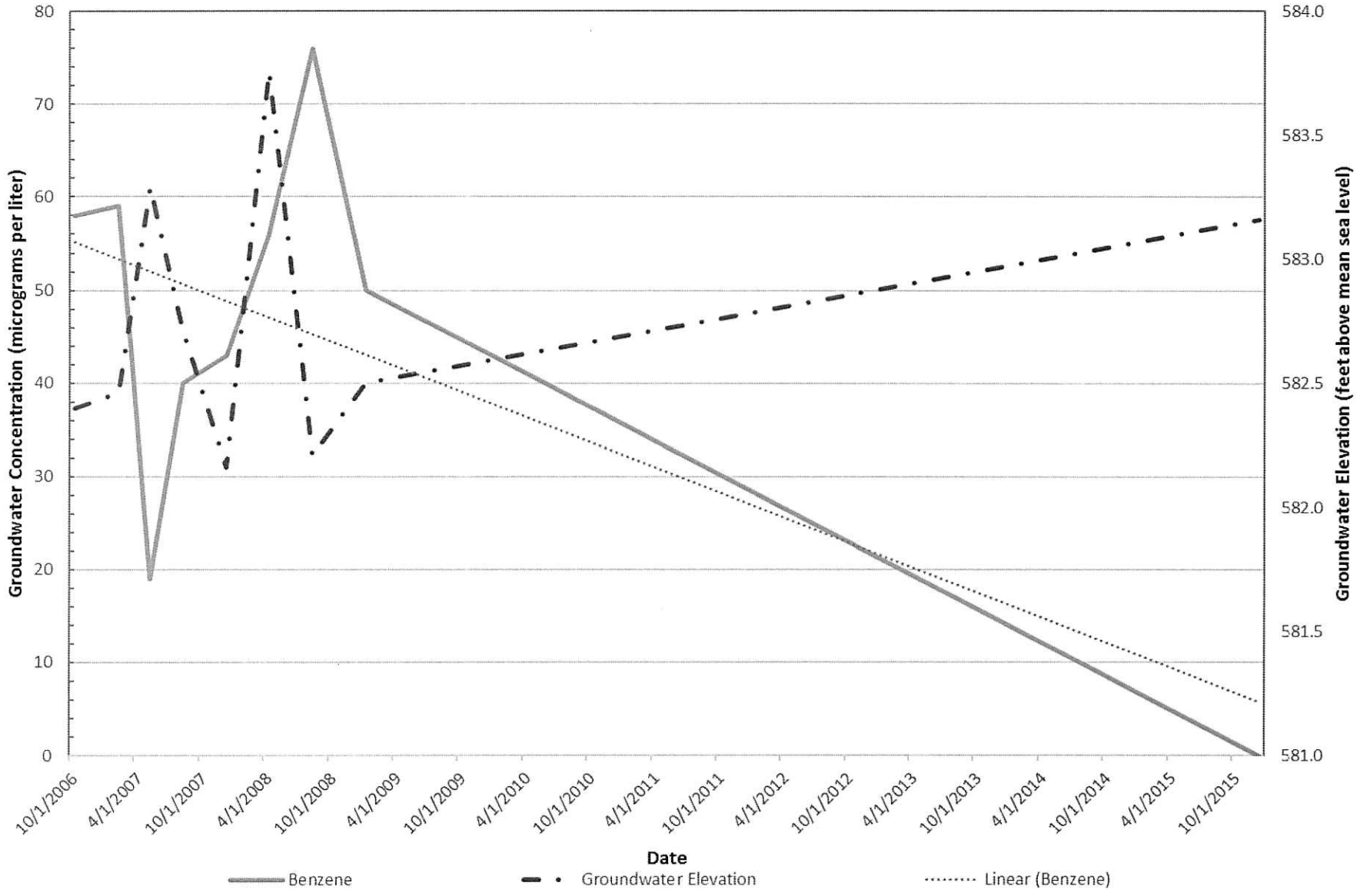
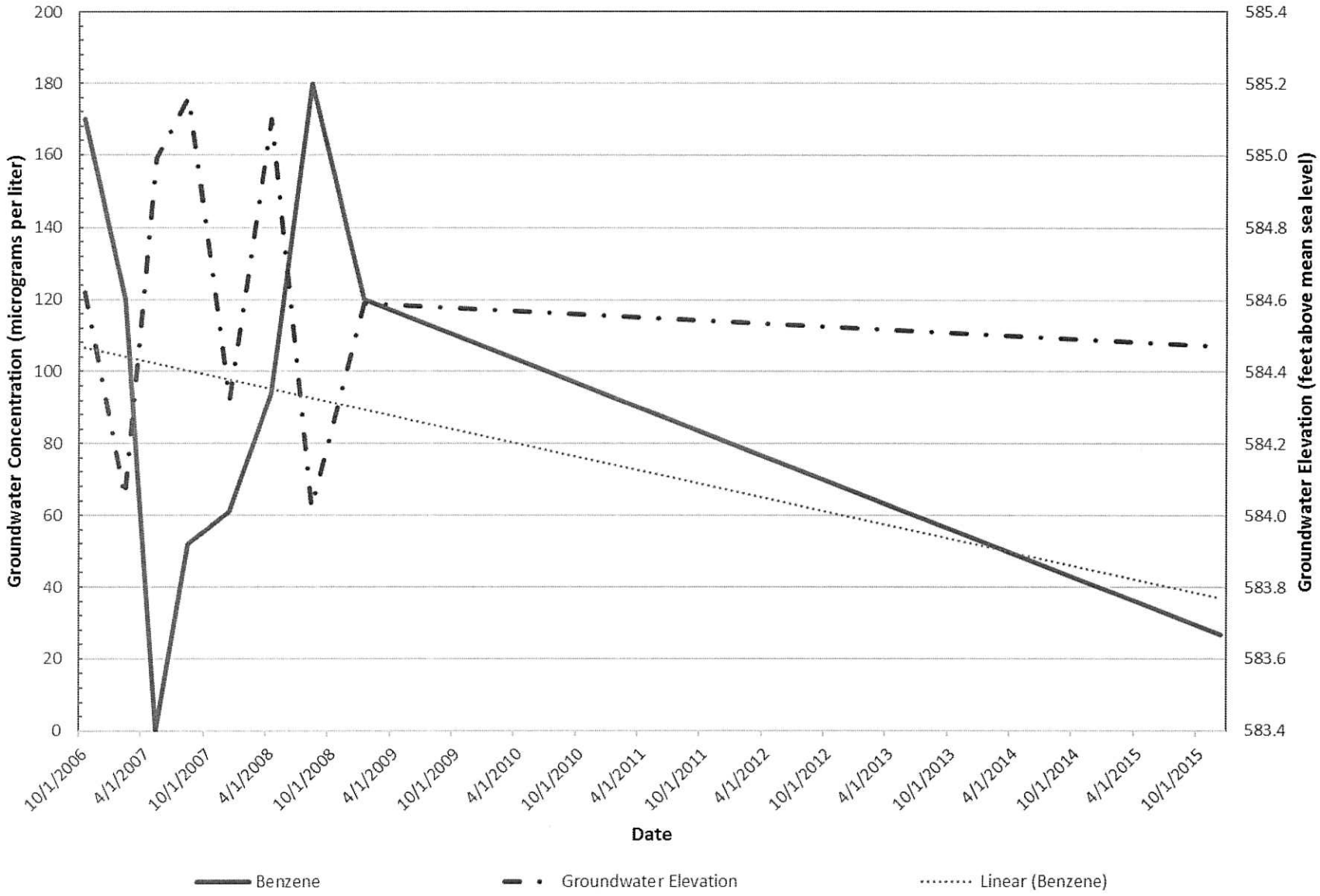


Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 3
MONITORING WELL MW-4 BENZENE GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
A Division of SET Environmental Inc.

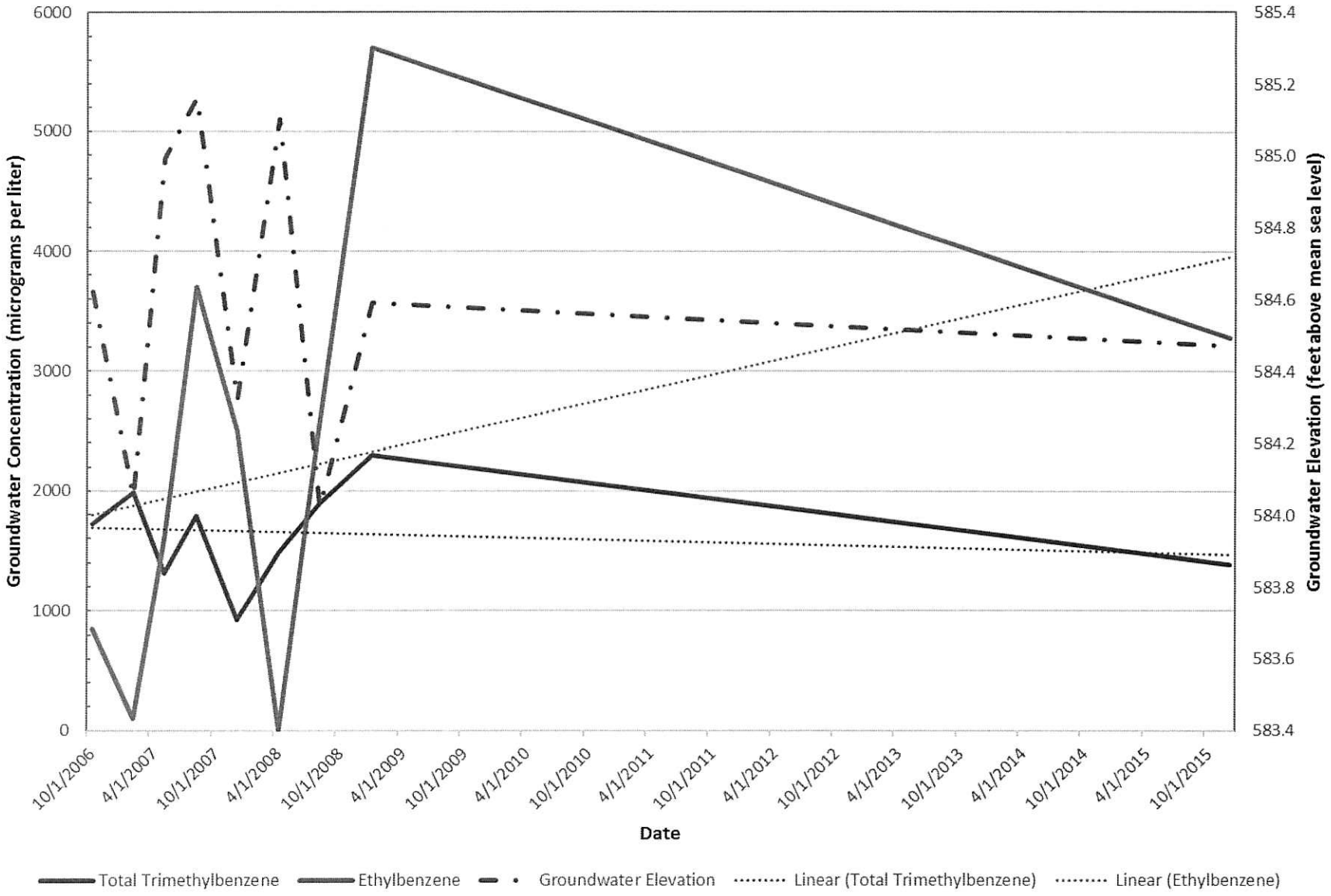


Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 4
MONITORING WELL MW-6 BENZENE GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
A Division of SET Environmental Inc.



Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 5
MONITORING WELL MW-6
TOTAL TRIMETHYLBENZENE AND ETHYLENE GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
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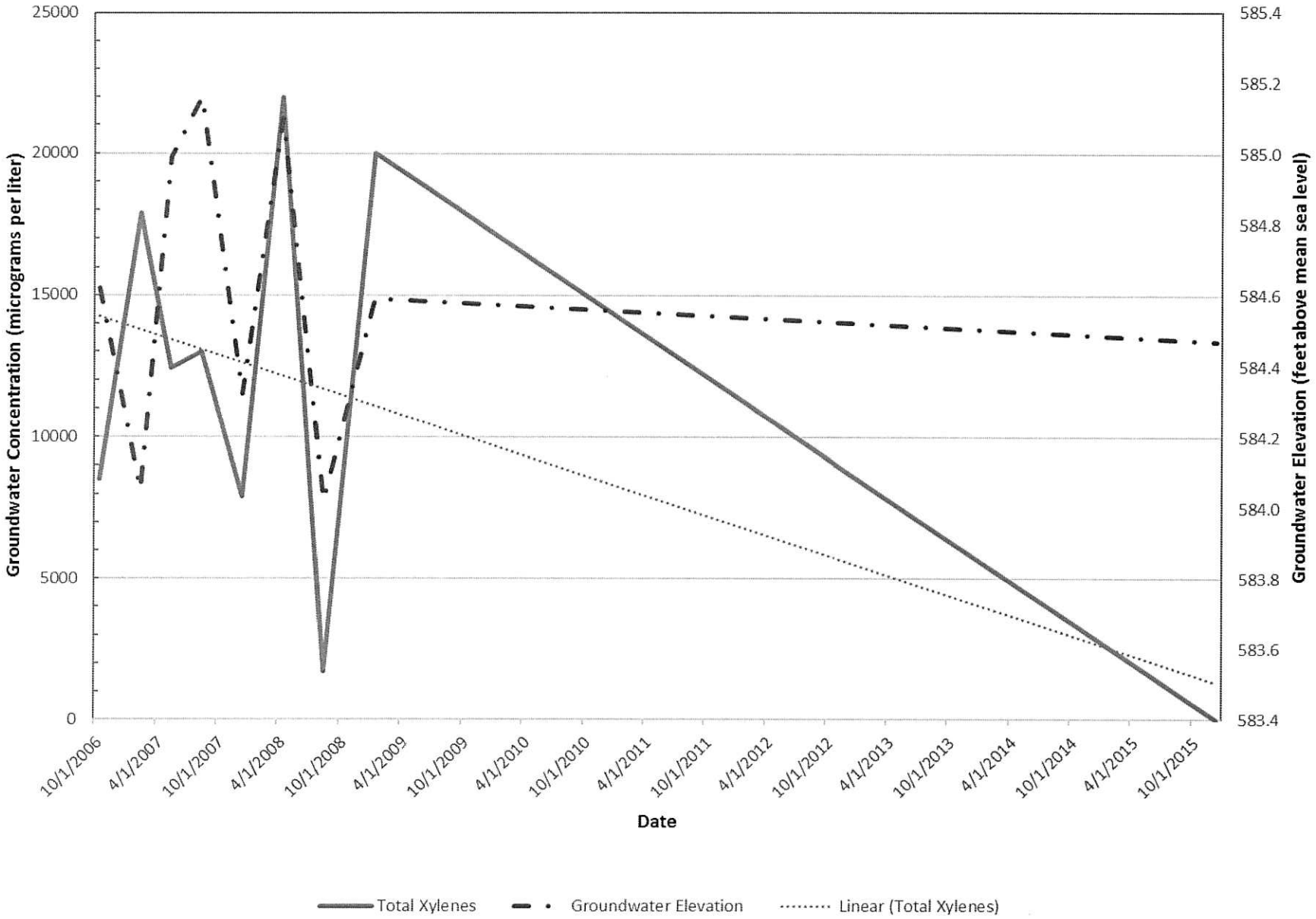

Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 6
MONITORING WELL MW-6
TOTAL XYLENES GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
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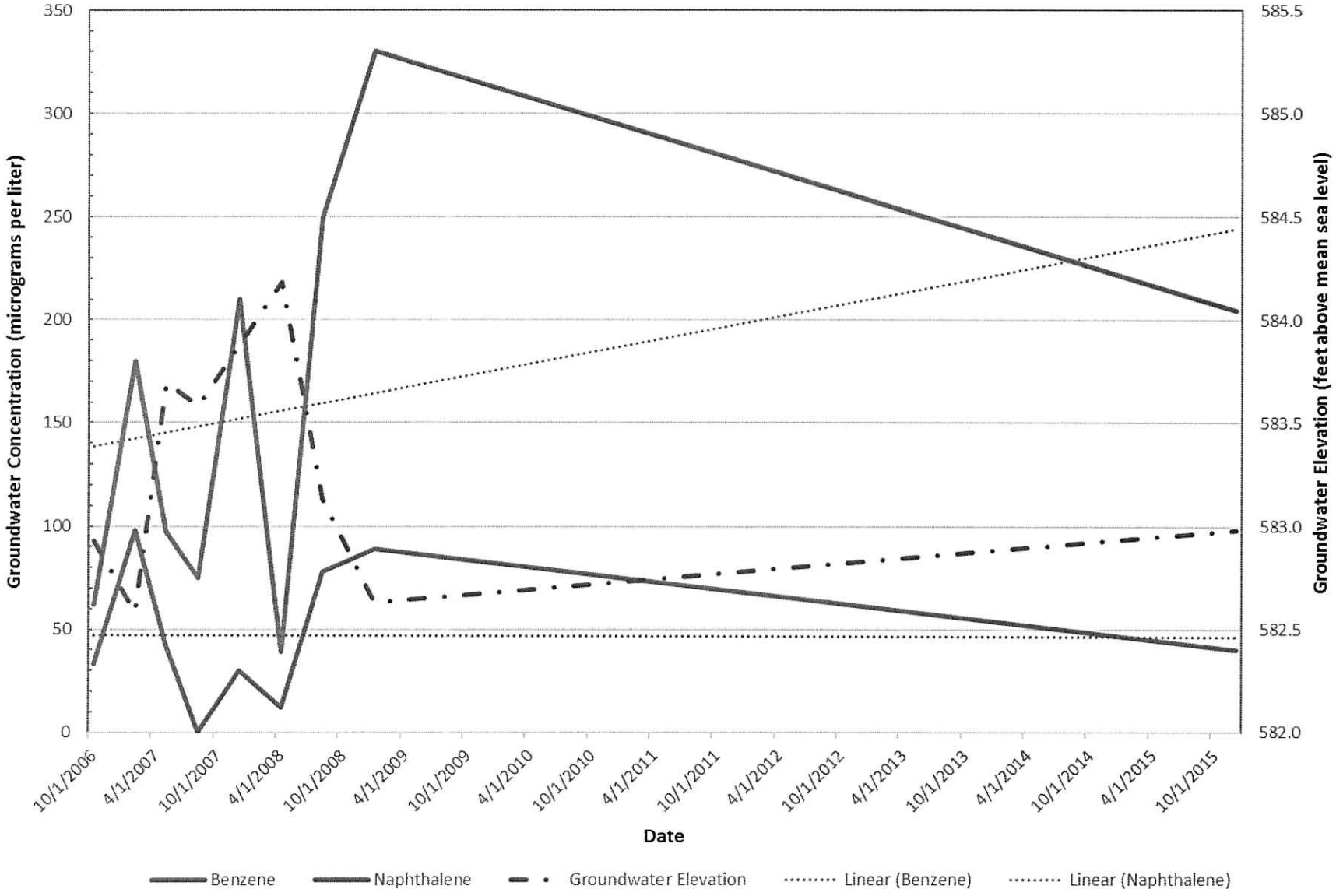
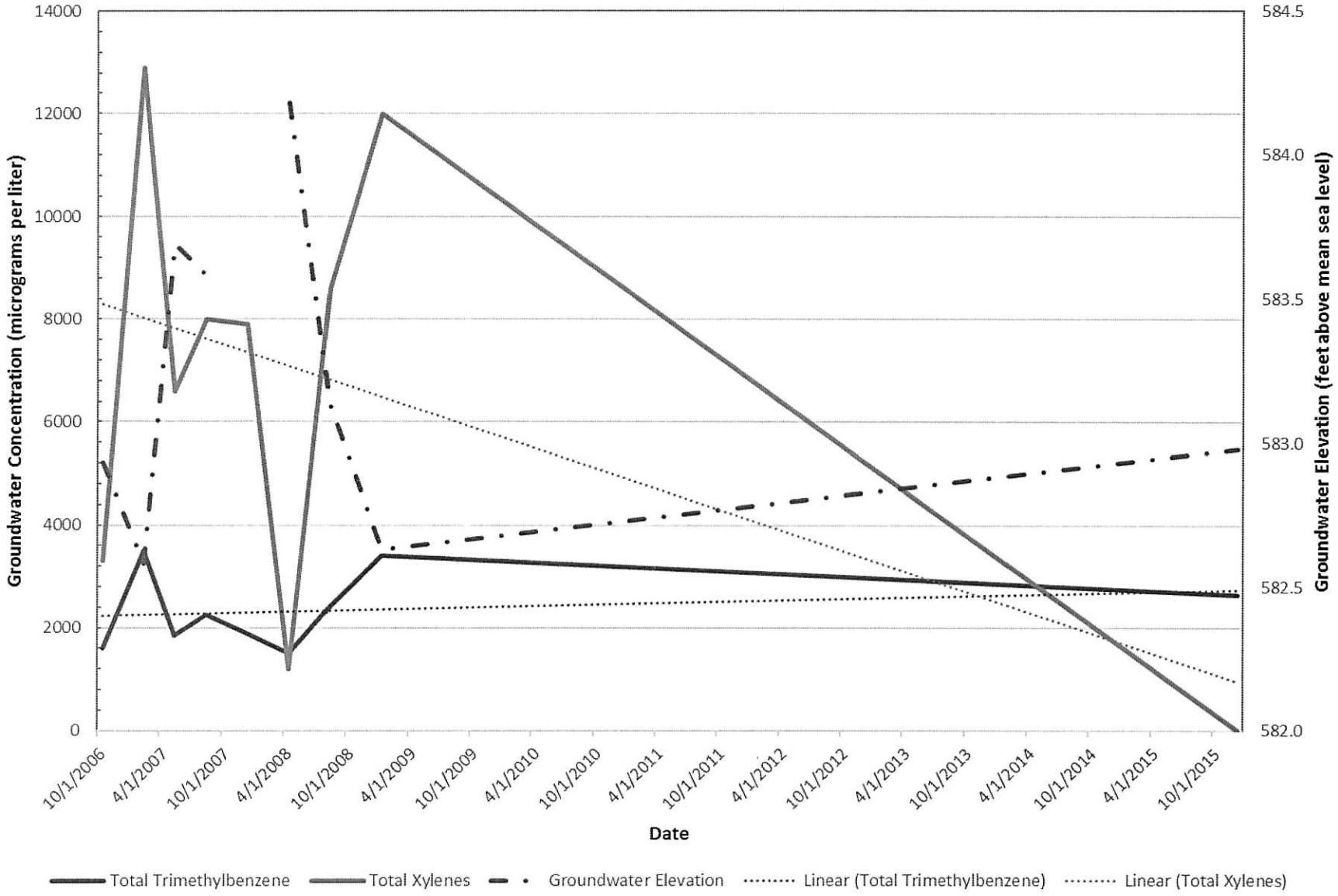


Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 7
MONITORING WELL MW-8
BENZENE AND NAPHTHALENE GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
A Division of SET Environmental Inc.



Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 8
MONITORING WELL MW-8
TOTAL TRIMETHYLBENZENE AND XYLENES GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
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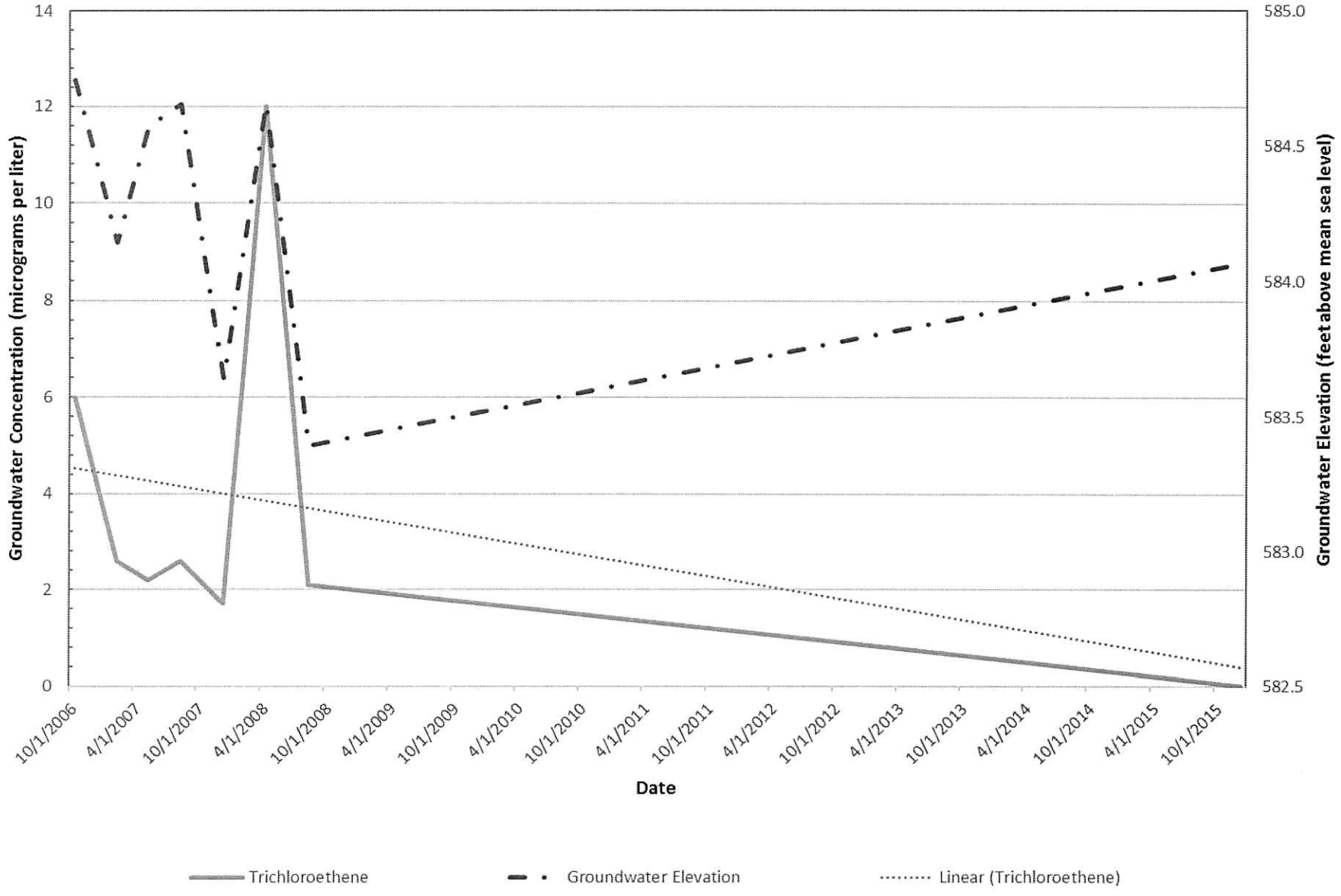
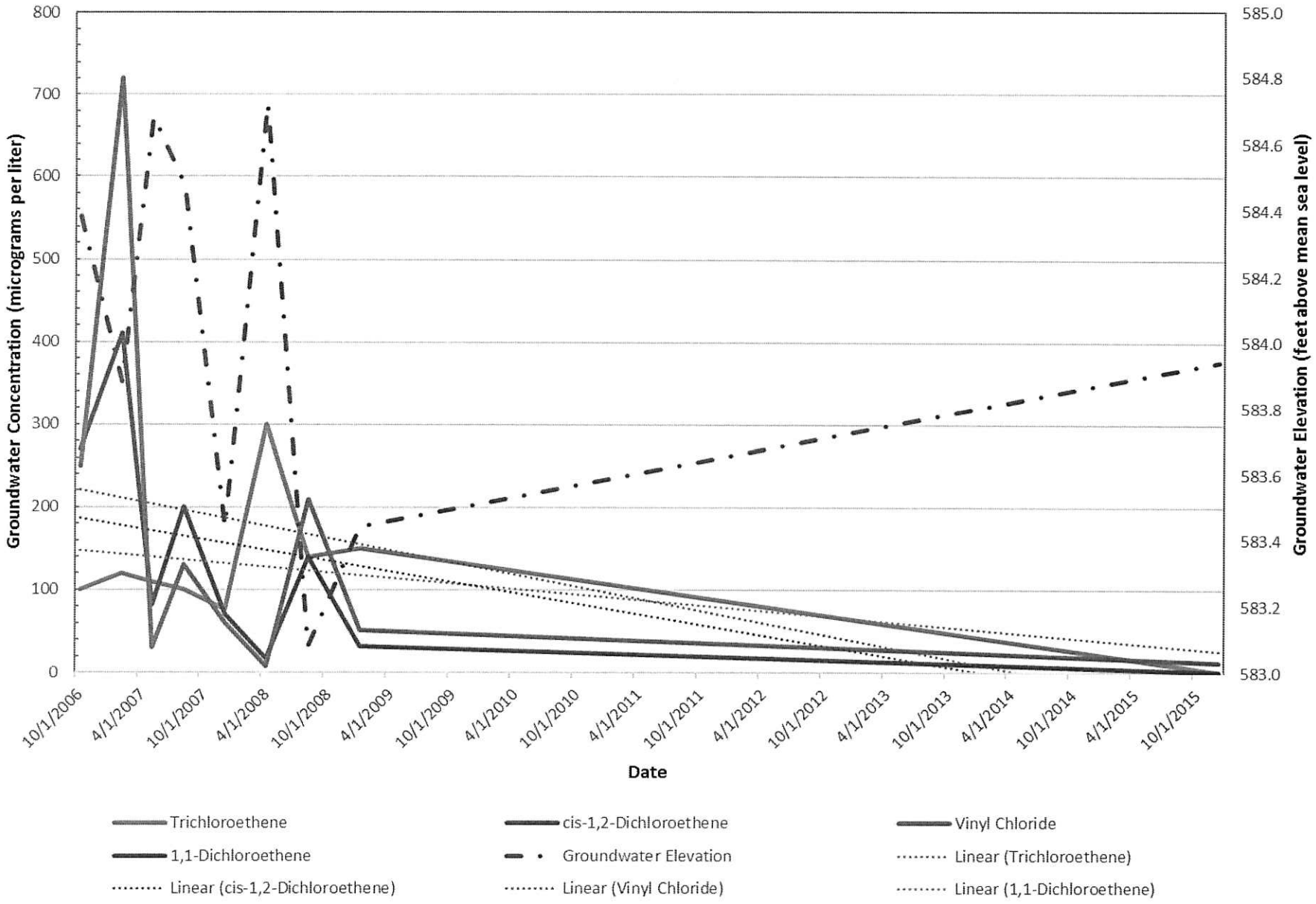


Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 9
MONITORING WELL MW-1
TRICHLOROETHENE GROUNDWATER TREND GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
A Division of SET Environmental Inc.



Project: 1604-1210-0002

Date: April 7, 2017

FIGURE 10
MONITORING WELL MW-2
CHLORINATED VOLATILE ORGANIC COMPOUND GROUNDWATER TRENDS GRAPH
WAYNE PIGMEN CORPORATION
300 SOUTH BARCLAY STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
A Division of SET Environmental Inc.

Toni Schoen

From: Ryan, Nancy D - DNR <Nancy.Ryan@wisconsin.gov>
Sent: Friday, April 28, 2017 2:05 PM
To: Toni Schoen
Subject: Wayne Pigment - Supplemental Site Investigation/Remedial Action Plan Review March 27, 2017 Email - DNR response

Hi Toni,
As discussed yesterday, I am requesting that you provide some additional information regarding the former Wayne Pigment site in order for me to provide a response to the request for approval of the Site Investigation/Remedial Action plan report dated January 31, 2017. Based on review of your April 11, 2017 response referenced above and discussions at our meeting held on April 12, 2017, DNR is requesting the following information be submitted – (Numbered responses referenced where applicable)

Items #2 and 3 from the April 11, 2017 response document:

- Submit and discuss the results from the pre-excavation soil sampling; discuss remedial action goals and proposed excavation limits if revised.
- Provide further discussion regarding (and considering pre-excavation soil sample results) to support a determination that the extent and degree of contamination below building 34 is sufficiently defined to identify significant source areas.

Item #6. DNR will require further assessment of contamination in the area of SB-41 – confirm that this will be done.

- Complete an assessment of the potential for vapor intrusion from contaminants on the 300 S. Barclay property to impact buildings on the 214 E Fla St. property. Provide plan to collect data if vapor intrusion cannot be ruled out based on preliminary screening criteria. Utilize information collected on adjacent property to determine if/where vapor sampling should be conducted. This does not need to be completed prior to SI/RAP approval, but it must be clear that an assessment will be conducted, and steps taken to mitigate/remediate if necessary.

Although not needed prior to dnr's approval or conceptual approval of SI/Remedial action plan I'm confirming that the following items will be provided by Key,.

- Submittal of an exemption request to allow construction on an abandoned landfill
- Soil management plan w/ soil characterization/haz waste determination to DNR to establish soil management requirements related to TCE area on Oregon St. and anywhere else where soil will be disturbed during construction or remediation activities. This includes developing a soil management plan for soil replaced on site or within utility trenches (need a 718.12 or 718.15 approval for replacement of contaminated soil/fill into utility trench).
- Submittal of detailed drawings showing areas that will be disturbed (for utilities, landscaping, construction, etc.). Detailed landscaping/soil capping plans.

Key's proposed plan for off-site groundwater monitoring wells as shown on Proposed Off-site Monitoring Well Locations figure is acceptable. At this time we would not be asking for additional wells. Soil and groundwater data collected for the adjacent property to the west of the Oregon parcel should be used to supplement SI and to establish extent and degree of contamination. Although we concur with the proposed locations, it is possible that further assessment could be required based on new information.

I understand that PPG GP LLC would like to obtain approval or conceptual approval of the remedial action plan in the very near future. Once I receive the information requested above, I hope to be able to provide a response.
If you have any questions, concerns, please let me know or discuss with me when we meet next Monday. Please also share with your clients and/or provide me with names/email addresses for anyone who you think would like to receive this email.

Thanks,

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Nancy D. Ryan
Hydrogeologist, Bureau for Remediation and Redevelopment
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King, Jr. Dr.
Milwaukee, WI 53212
Phone: (414) 263-8533
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nancy.ryan@wisconsin.gov


dnr.wi.gov


Toni Schoen

From: Ryan, Nancy D - DNR <Nancy.Ryan@wisconsin.gov>
Sent: Wednesday, June 14, 2017 3:10 PM
To: Toni Schoen
Cc: Halbur, Kathy (halbur.kathy@epa.gov)
Subject: Wayne Pigment
Attachments: Wayne Pigment - Supplemental Site Investigation/Remedial Action Plan Review March 27, 2017 Email - DNR response

Hi Toni,
Just want to confirm with you what DNR is waiting for with respect to the RAP and other proposed actions at Wayne Pigment site. See attached email with details. As far as I know, none of these items have been addressed yet.

I also wanted to mention the 214 off-site investigation. You had submitted a letter, 214 E. Florida St. Vapor Intrusion Assessment dated May 10, 2017, where you had asked for DNR concurrence that the owner of 214 E. Fla. should be responsible for conducting a vapor assessment at their property. As discussed on the phone with you (and Ken the next day) on or around May 15, while DNR will require a vapor assessment to be conducted by the 214 site, that does not relieve PPG GP from its responsibility to evaluate the pathway for potential impacts from contaminants originating on the PPG property. So, we do not concur with request in the May 10 letter. However, as you know, since then, 214 E. Fla. has submitted a workplan to DNR and requested dnr review/approval of their plan to conduct site investigation activities at their property, including some sub-slab investigation. I have not yet reviewed the Fla. St. work plan in detail yet. PPG GP may of course utilize information collected during the 214 E. Fla. site investigation once it becomes available to support/supplement the vapor assessment required of PPG.

Just want to be sure we're on the same page as to what we're waiting for as I understand PPG GP is hoping to have approval of a RAP in the near future. Please let me know if you have any questions about this and if you have an idea of when you might be submitting the revised RAP, please let me know.
Thanks,

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Nancy D. Ryan
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Wisconsin Department of Natural Resources
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Milwaukee, WI 53212
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Fax: (414) 263-8550
nancy.ryan@wisconsin.gov


dnr.wi.gov


Toni Schoen

From: Ryan, Nancy D - DNR <Nancy.Ryan@wisconsin.gov>
Sent: Monday, March 27, 2017 3:00 PM
To: Toni Schoen
Subject: Wayne Pigment - request for additional information forSI/RAP review
Attachments: 20170322110507101.pdf; Former Wayne Pigment Supplemental SI-Revised RAP questions .docx

Toni,
I have drafted a list of questions/request for additional information related to my review of the Jan 31, 2017 Former Wayne Pigment Corp Site Supplemental Site Investigation Report and Revised Remedial Action Plan. Please take a look at the questions, feeling free to contact me to discuss, and provide responses as needed so that we can provide a written response to the completeness of the SI and remedial proposal for the site. I understand that some issues, particularly off-site investigation, may not be able to be addressed right now others should be clarified as best you can. Please call to discuss further. I may have other questions too. And, if you have questions about the VI remediations, we can touch base with Alyssa Sellwood.
Thanks,

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Nancy D. Ryan
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Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King, Jr. Dr.
Milwaukee, WI 53212
Phone: (414) 263-8533
Fax: (414) 263-8550
nancy.ryan@wisconsin.gov


dnr.wi.gov


Former Wayne Pigment site – Supplemental Site Investigation Report and Revised Remedial Action Plan Review Comments/Questions/Request for additional information.

Confirm that the RP will obtain an exemption from solid waste rules (NR 506.05 Wis. Adm. Code) before construction begins to allow building on an historic fill site.

TCE contamination area: We understand that the pre-excavation soil sampling in the TCE area has already been conducted. Please provide the results and discuss whether the extent and degree of contamination under building 34 has been sufficiently defined. Do the results change the limits of the proposed excavation? Provide details on the interior features of the building that might indicate potential source areas and that may present impediments to further investigation.

The rationale for selecting 8.8 ppm TCE as a clean-up goal should be further discussed.

Haz waste determination:
Provide further discussion on soil management for the proposed TCE remedial excavation. Specifically a haz waste determination with details on how soil proposed for excavation has been characterized and how areas determined to be hazardous will be segregated from non-haz.

Provide more information on TCLP sampling methods and results . It does not appear that TCLP testing was conducted at locations within the area proposed for ZVI treatment where metals concentrations are extremely high and it appears that some of this area is proposed to be landscaped that would involve excavation of some of this soil.

We will require investigation of soil/groundwater in the location of SB-41 where the composite sample (from ? depths) was found to be characteristically hazardous based on ignitability.

We also need additional investigation of soil and groundwater to better define the extent of contamination in the area between Building 11 and the former tank farm – shown as elevated dock area on the site maps. Propose additional investigation in this area.

A haz waste determination should be made for any area of the site proposed to be disturbed for remedial excavations, excavation for construction of the remedial cap, utility construction, foundations, etc.

Groundwater:
Provide a more thorough discussion of groundwater contamination results including assessment of trends, where contaminants are migrating off-site and if and where remediation is needed. You identify need for remediation of TCE and metals. No discussion of PVOCs or PAHs is provided.

Offsite investigations:
We understand environmental investigations have recently been conducted at the properties to the west and east of the site and that information may be available to use to better define the extent and degree of potential off-site contamination. Based on the figure, *Proposed Off-site Monitoring Well Locations,* DNR potentially would like to see

additional wells installed at the following locations: northwest of B-2/TW-2, west of TW-4, southwest of TW-3,east of MW-12, off-site south of SB-91. This is in addition to proposed wells: east of TW-10, southeast of MW-15, south of MW-14R and west of MW-19. We understand that some of this investigation may be conducted by the adjacent property owners, we should discuss the suggested new locations, justification for needing or not needing them, features of the site that make it difficult to complete the investigation, and/or responsibility of off-site parties for installing wells, etc.
Please indicate if you plan to collect soil samples during construction of off-site monitoring wells. (If such wells are installed by Key)

Utilities: We have previously requested this and would like additional information about underground utilities below building 11, sanitary connections and construction of sumps, where they discharge and whether they are currently discharging to the sewer. Also provide specific information (including maps) regarding the location and construction of new utility lines and how current lines will be abandoned. Also provide details on construction of new utilities, i.e., will utility collars will be constructed to prevent contaminant migration? Discuss the status of/future disposition of sumps in building 11.

Remedial Capping Plan: Provide more details regarding construction of the proposed landscaped areas including a description of the types of plants (root ball size) that will be used, and the depth required to accommodate the plantings. Areas requiring excavation that would produce potentially hazardous waste upon excavation should be identified prior to excavation. If applicable, haz waste management rules must be followed.

Provide discussion to support the proposed 1.5' thick soil cap. i.e. why it will be protective, can be maintained, etc. We will need details on where exactly the soil cap will be placed, the slope of any non-flat areas, etc. DNR may consider approving a cap of this thickness on the Oregon St. property based on your justification, however, may be more supportable if you add a warning layer. Based on the high concentrations of metals and PVOCs south of building 11, we will require something more protective for landscaped areas on the Barclay parcel. We expect that a capping plan for landscaped areas would ensure that contaminated soil will not be disturbed/encountered in the future. A thicker clean cap with possibly warning layer should be considered and a revised plan proposed.

Soil gas samples: Provide further information on the depth and sampling methods used for the soil gas samples collected around building 11. Were leak tests conducted? If the samples were collected at 5 feet or less, these would be not be considered deep soil gas and the appropriate vapor risk screening level would be the sub-slab level. Please describe sampling methods.

Vapor Intrusion:
Sub-slab vapor depressurization system (SSDS): In addition to the proposed active SSDS under building 34, based on the sub-slab results from Building 33 where two of the four locations exceeded vapor risk screening levels, we will require an active system under building 33 and the proposed addition between building 33 and 34.

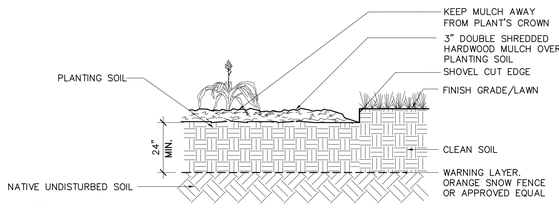
Discussion with Alyssa Sellwood . She suggested the following regarding the active system design: She suggested that the systems in Buildings 33 and 34 be designed with clean air intakes. This would be good for Building 11 too, if possible. (See attached

figure) To allow verification of system effectiveness, consider installing ports during construction that extend to below the new floor to allow testing for pressure differential. Also consider installing a port or ports extended below the original floor for future testing for TCE to determine if the system can be turned off. Provide further details on construction design and how you will verify SSDS is operating as designed for the active system(s). Indoor air sampling will be required.

For Building 11, we will need more soil and groundwater investigation in the area where the addition is planned (mentioned above). This information should be used to determine whether the vapor mitigation system in this area should be active. Also, because contaminated groundwater is in contact with the building, you cannot rule out vapor intrusion as a pathway of concern and will need to conduct a performance evaluation to verify the effectiveness of the passive system – either by verifying a constant negative pressure, and/or verify that the air trapped below the new floor is sufficiently oxygenated and not contaminated above VRSLs. Potential movement of air from outside the building near SG-4 should be evaluated and basement walls inspected/sealed to limit that possibility. Collection of Indoor air sample(s) will also be required. Please provide additional details on how the system will be constructed, including cross section, and describe how verification testing accomplished.

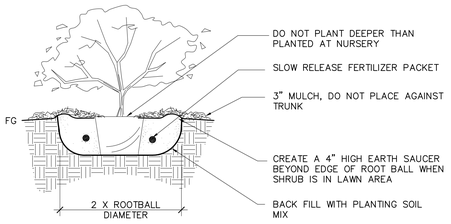
Metals remediation:
Provide additional information to support the proposed remedial ZVI treatment of chromium and arsenic contaminated groundwater. Effectiveness of treatment should be described based on experience gained at other sites with similar site characteristics and conditions, scholarly papers, and/or case studies, etc.

Attachment 2



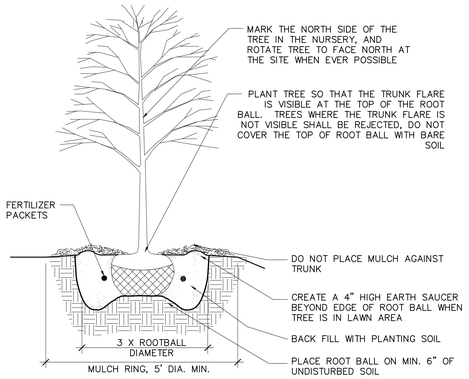
1 C120 SHOVEL CUT EDGE / PLANTING SOIL

NTS



2 C120 POTTED/CONTAINER PLANTING DETAIL

NTS



3 C120 B&B TREE PLANTING DETAIL

NTS

LANDSCAPE DATA

OVERALL SITE AREA = 31,372 SF (.72 AC)
ZONING DESIGNATION = IM, INDUSTRIAL-MIXED

INTERIOR PARKING LOT LANDSCAPING REQUIREMENTS
PARKING LOT AREA = 9,919
REQUIRED LANDSCAPE AREA – 5% OF LOT AREA = 495 SF
PROPOSED LANDSCAPE AREA = 1,483 SF
PARKING SPACES TOTAL 28 / 8 = 3.5 x 2 = 7 TREES AND 7 SHRUBS REQUIRED
TOTAL TREES PROPOSED – 7 CANOPY (4 EXISTING TO REMAIN) AND 1 ORNAMENTAL
TOTAL SHRUBS PROPOSED 25

NOTES:

1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING, PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN

2. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

3. WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

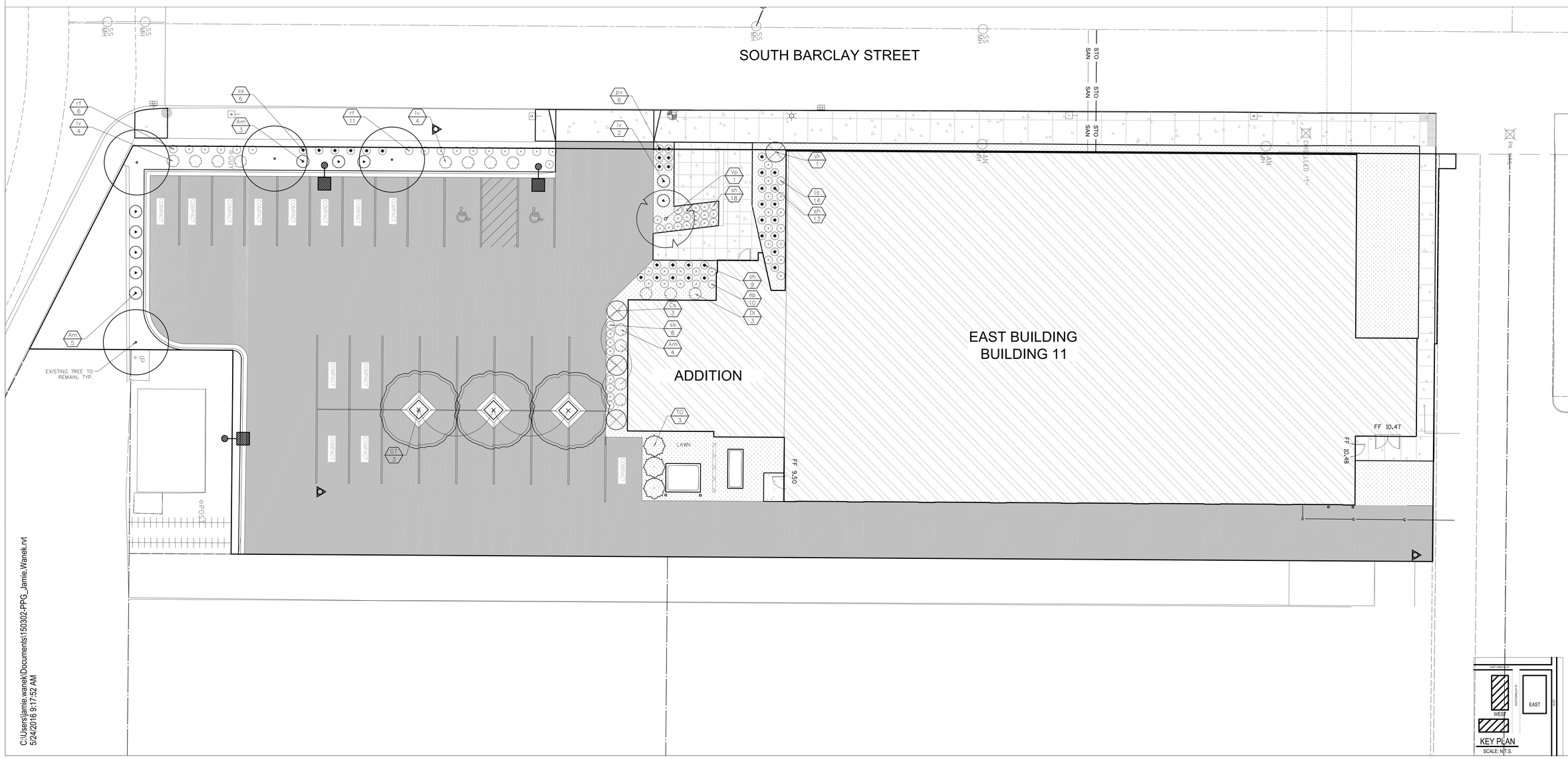
4. REMOVE ALL TWINE, ROPE, WIRE AND BURLAP FROM TOP AND SIDES OF ROOT BALL.

5. EXISTING SOILS HAVE BEEN DETERMINED TO BE HAZARDOUS PER THE ENVIRONMENTAL REPORT AND WILL NEED TO BE ENCAPSULATED OR REMOVED. ANY SOIL THAT IS REMOVED FROM SITE WILL NEED TO BE DISPOSED OF IN AN APPROPRIATE MANNER. ANY EXISTING UNENCAPSULATED SOIL THAT WILL BE EXPOSED WILL NEED REMEDIAL ACTION. SEE ENVIRONMENTAL REPORT FOR REQUIREMENTS RELATED TO ENCAPSULATION, REMEDIAL ACTION AND DISPOSAL.

6. ALL LANDSCAPE AREAS TO HAVE 3" DEPTH DOUBLE SHREDDED HARDWOOD MULCH.

LANDSCAPE PLANT SCHEDULE

Symbol	Botanical name	Common Name	Size/Root	Quantity	Comments
TREES					
GT	Gleditsia tri. 'Skycole'	Skyline Honeylocust	2.5" Cal–B&B	3	Male cultivar, thornless
SHRUBS					
Am	Aronia melanocarpa 'Autumn Magic'	Autumn Magic Chokeberry	3 Gal. Container	12	
Cs	Cornus sericea	Red Twig Dogwood	3 Gal. Container	3	
Dl	Diervilla lonicera	Northern Bush Honeysuckle	3 Gal. Container	3	
Iv	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	3 Gal. Container	7	
Vp	Viburnum prunifolium	Blackhaw Viburnum	7 Gal. Container	1	Single Stem
Vr	Viburnum rafinesquianum	Downy Arrowwood	3 Gal. Container	1	
EVERGREEN TREES/SHRUBS					
Ho	Thuja occidentalis 'Holmstrup'	Holmstrup Arborvitae	4' Ht. B&B	3	
PERENNIALS/GRASSES					
ep	echinacea purpurea	Purple Coneflower	1 Gal. Container	10	
ls	Liatris Spicata	Blazingstar	1 Gal. Container	14	
rf	Rudbeckia fulgida var. deamii	Deamii Black-eyed Susan	1 Gal. Container	17	
pv	Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass	1 Gal. Container	6	
sh	Sporobolus heterolepis	Prairie Dropseed	1 Gal. Container	40	
ss	Schizachyrium scoparium	Little Bluestem	1 Gal. Container	15	



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SHEET TITLE: LANDSCAPE PLAN

REVISIONS:

SCALE	VARIES
PROJECT NUMBER	150302
SET TYPE	**PLAN EXAMINATION**
DATE ISSUED	**07/12/2017**
SHEET NUMBER	C 120

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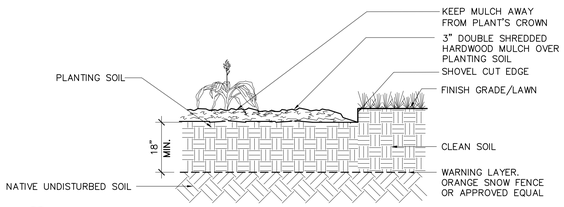
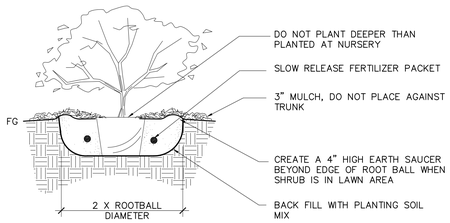


1 / C220 SHOVEL CUT EDGE / PLANTING SOIL

NTS



2 / C220 POTTED/CONTAINER PLANTING DETAIL

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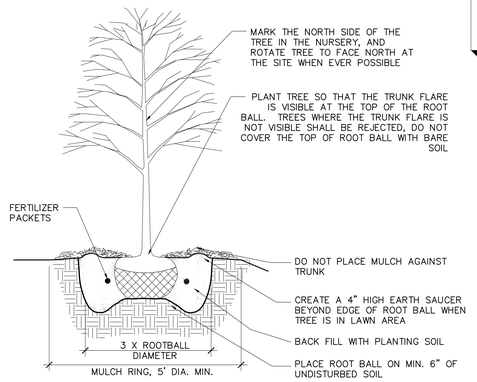


3 / C220 B&B TREE PLANTING DETAIL

NTS

LANDSCAPE DATA

OVERALL SITE AREA = 37,799 SF (.86 AC)
ZONING DESIGNATION = IM, INDUSTRIAL–MIXED

INTERIOR PARKING LOT LANDSCAPING REQUIREMENTS
PARKING LOT AREA = 10,802
REQUIRED LANDSCAPE AREA – 5% OF LOT AREA = 540 SF
PROPOSED LANDSCAPE AREA = 1,777 SF
PARKING SPACES TOTAL 34 / 8 = 4.25 x 2 = 8.5 TREES AND 8.5 SHRUBS REQUIRED
TOTAL TREES PROPOSED 8 CANOPY AND 1 ORNAMENTAL
TOTAL SHRUBS PROPOSED 23

NOTES:

1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING, PRUNE ONLY CROSSOVER LIMBS, CO–DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN

2. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

3. WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT

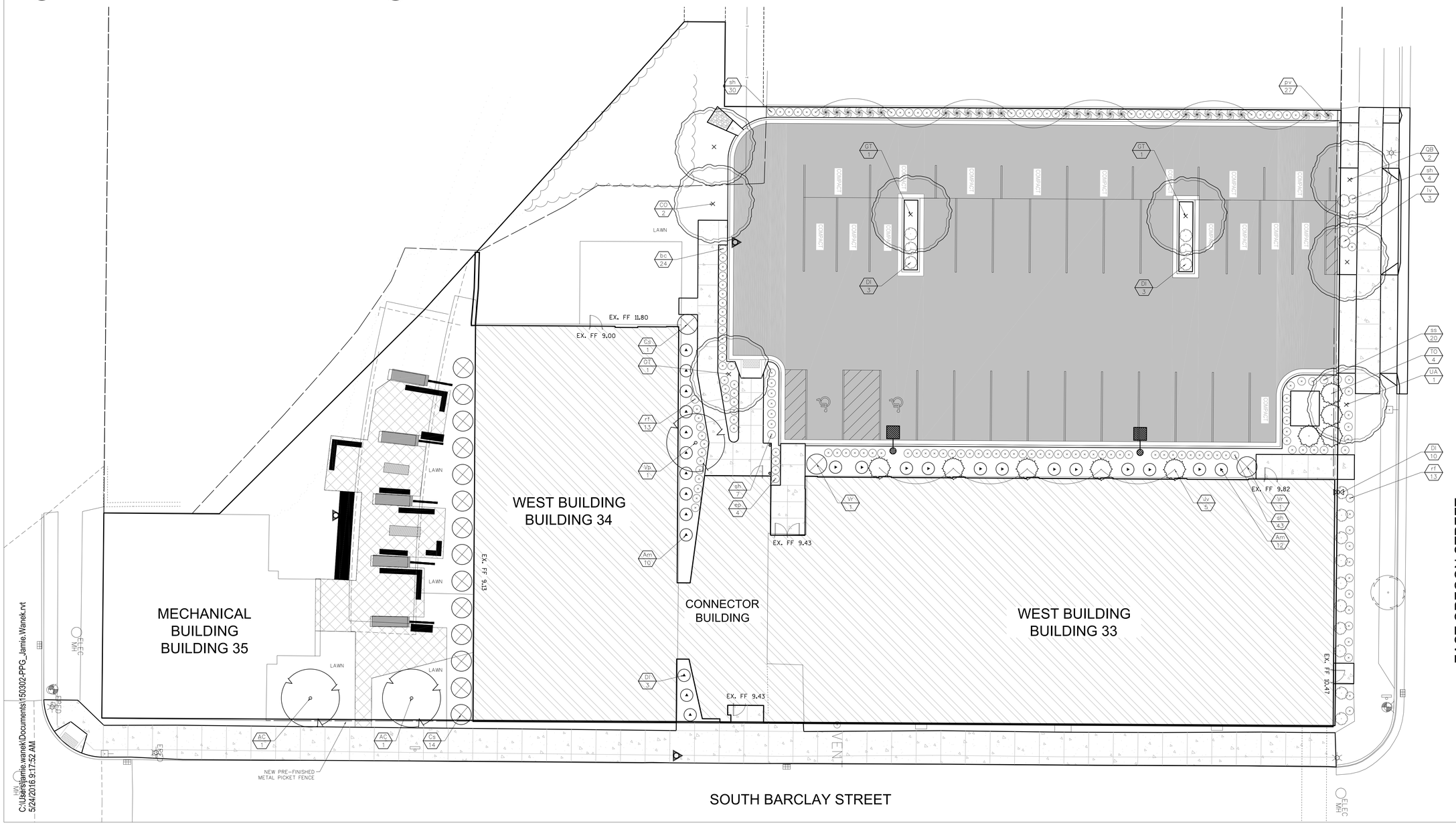
4. REMOVE ALL TWINE, ROPE, WIRE AND BURLAP FROM TOP AND SIDES OF ROOT BALL.

5. EXISTING SOILS HAVE BEEN DETERMINED TO BE HAZARDOUS PER THE ENVIRONMENTAL REPORT AND WILL NEED TO BE ENCAPSULATED OR REMOVED. ANY SOIL THAT IS REMOVED FROM SITE WILL NEED TO BE DISPOSED OF IN AN APPROPRIATE MANNER. ANY EXISTING UNENCAPSULATED SOIL THAT WILL BE EXPOSED WILL NEED REMEDIAL ACTION. SEE ENVIRONMENTAL REPORT FOR REQUIREMENTS RELATED TO ENCAPSULATION, REMEDIAL ACTION AND DISPOSAL.

6. ALL LANDSCAPE AREAS TO HAVE 3" DEPTH DOUBLE SHREDDED HARDWOOD MULCH.

LANDSCAPE PLANT SCHEDULE

Symbol	Botanical name	Common Name	Size/Root	Quantity	Comments
TREES					
AC	Amelanchier canadensis	Shadblow Serviceberry	2.0" Cal–B&B	2	
CO	Celtis occidentalis 'Prairie Pride'	Prairie Pride Common Hackberry	2.5" Cal–B&B	2	
GT	Gleditsia tri. 'Skycole'	Skyline Honeylocust	2.5" Cal–B&B	3	Male cultivar, thornless
QB	Quercus bicolor	Swamp White Oak	2.5" Cal–B&B	2	
UA	Ulmus x 'New Horizon'	New Horizon Elm	2.5" Cal–B&B	1	
SHRUBS					
Am	Aronia melanocarpa 'Autumn Magic'	Autumn Magic Chokeberry	3 Gal. Container	22	
Cs	Cornus sericea	Red Twig Dogwood	3 Gal. Container	15	
Dl	Diervilla lonicera	Northern Bush Honeysuckle	3 Gal. Container	19	
Iv	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	3 Gal. Container	3	
Vp	Viburnum prunifolium	Blackhaw Viburnum	7 Gal. Container	1	Single Stem
Vr	Viburnum rafinesquianum	Downy Arrowwood	3 Gal. Container	2	
EVERGREEN TREES/SHRUBS					
Ho	Thuja occidentalis 'Holmstrup'	Holmstrup Arborvitae	4' Ht. B&B	4	
Jv	Juniperus virginiana 'Taylor'	Taylor Juniper	4' Ht. B&B	5	
PERENNIALS/GRASSES					
bc	Bouteloua curtipendula	Sideoats Grama	1 Gal. Container	24	
ep	echinacea purpurea	Purple Coneflower	1 Gal. Container	4	
rf	Rudbeckia fulgida var. deamii	Deamii Black–eyed Susan	1 Gal. Container	26	
pv	Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass	1 Gal. Container	27	
sh	Sporobolus heterolepis	Prairie Dropseed	1 Gal. Container	77	
ss	Schizachyrium scoparium	Little Bluestem	1 Gal. Container	20	



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